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MUCOUS GASTRITIS IN INFANCY.*

By EDMUND CAUTLEY, M.D.Cantab., F.R.C.P.Lond.,

*Senior Physician to the Metropolitan Hospital; Senior Physician to the
Belgrave Hospital for Children.*

IN justification of the name "*mucous gastritis*" I may plead its analogy with "*mucous colitis*." In both affections there is a profuse secretion of mucus. It is sometimes urged that mucous colitis is a nervous affection, not an inflammatory one. I do not suggest such an ætiological factor in the mucous gastritis of infancy. Sometimes the two disorders are coincident in the same infant, and in occasional patients the affection of the colon is more severe than that of the stomach, and the stools contain blood. Possibly a better name would be "subacute gastric catarrh," or "catarrhal gastritis." Pathologically there is a catarrh of the mucosa, characterised by excessive secretion of mucus. The mucosa is pale and flabby and more or less covered with mucus in the cadaver. I have brought the condition before this Section for criticism as to its nomenclature, ætiology, diagnosis and treatment. I propose to limit my paper to the consideration of the disorder in infancy, especially in the first three months of life, for it is at this age it is most characteristic and there is serious

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liability to error in diagnosis. In older children it is common in mild forms, leading to various dyspeptic troubles. In infants after the first three months of life it is rarely serious, unless the child is premature or marasmic—that is, in a stage of development similar to that of a younger babe. It is not necessary for me to burden your patience with details of numerous cases. The description of a typical and severe attack will be sufficient for my purpose, but I must remind you that in a mild form the affection is of frequent occurrence.

Two years ago a female infant was sent to me from one of the suburbs as possibly a case of congenital hypertrophy of the pylorus. She was a second child and weighed 6 lb. at birth, but was said to have been a month premature. The child's weights at the end of the succeeding five weeks were 6, $6\frac{1}{4}$, $6\frac{1}{2}$, 7 and $6\frac{3}{4}$ lb. respectively. For the first ten days of life she was nursed by the mother. After this the diet had consisted of peptogenic milk, until the last few days before I saw her. Progress was satisfactory for four weeks. Vomiting then began, preceded by pallor, and recurred after almost every feed. The bowels acted with the assistance of magnesia, and there had been no special history of constipation. The attack was said to have been started by vaccination. At the age of thirty-nine days, when I saw the child, she seemed quite bright, with a clean tongue and inoffensive breath. She vomited immediately after a feed of albulactin, the vomit containing a little mucus and having a slightly sour smell. On examination of the abdomen there was no visible peristalsis, no evidence of dilatation of the stomach, and no palpable pylorus. A diet of whey 2 dr. every quarter of an hour while awake was prescribed, the quantities to be increased to $\frac{1}{2}$ oz. every half hour, 1 oz. every hour, and 2 oz. every two hours. On reaching the full feed of 2 oz. cream was to be added gradually. Cocaine, $\frac{1}{100}$ gr. hourly, was ordered.

Shortly afterwards the child's doctor informed me that progress was not satisfactory, so I advised that the diet should be changed to Allenbury No. 1 food and that the stomach should be washed out twice a day.

Three weeks after the first consultation she was brought to see me again. She had improved for a time on the Allenbury food. It then seemed to disagree, so the diet had been changed to milk diluted with four parts of water, and a small quantity of albulactin, 1 oz. being given every two hours. The vomiting still continued, unless the stomach was washed out twice daily. The stools contained a moderate amount of faecal matter.

The child seemed more wasted, the skin of the abdomen being lax and shrivelled. She still weighed 6 lb., but had lost 5 oz., previously gained, in the last six days. Marked peristalsis of the stomach was visible. During the contraction of the stomach I thought I could feel the pylorus as a thickened cord. In view of the possibility of operative treatment being required, the patient was admitted into a nursing home and put on a diet of whey.

When seen next day the report was that there had been little vomiting, no visible gastric peristalsis, and a fairly normal stool. It was now ascertained that the vomiting was characterised by the presence of large masses of tenacious mucus, which were evacuated with great difficulty. It became more frequent, and sometimes gave rise to severe choking attacks. Frequently the vomit consisted entirely of mucus. This vomiting persisted for a considerable time. Moreover the stools occasionally contained mucus, and for some days large quantities were present in each evacuation.

After a few days' treatment by lavage the washing was discontinued as it appeared to me to be doing absolutely no good. The child then began to improve slowly, the secretion of mucus becoming progressively less. Ten days after admission to the home she weighed 5 lb. 13 oz. In the next ten days she gained 6 oz., and 2½ oz. in another four days. During this period her food had been gradually increased, and she was discharged on a diet of cream, whey and lactose. Ten weeks later she weighed 9½ lb., and was digesting feeds of milk 3 oz., barley-water 2 oz. She occasionally vomited and brought up a little mucus.

The two striking features of this case were the enormous amount of mucus secreted and the resemblance of the condition in some respects to congenital hypertrophic stenosis of the pylorus. Thus the vomiting began in the fourth week of life, and had become progressively worse. In the sixth week peristalsis was visible, though it may have been present earlier. At this time the pylorus was palpable on one occasion, but there was obviously no complete obstruction. I thought there might be a mild degree of hypertrophy and that the obstruction was due to secondary spasm, congested mucous membrane or a plug of mucus. It was not until the child was in the nursing home that the excessive secretion of mucus was recognised. The vomiting was not projectile to the extent seen in typical pyloric hypertrophy, nor were several feeds retained before it occurred.

The *ætiology* of this disorder is to my mind fairly simple. These cases are comparatively rare in the breast-fed. For some reason,

such as a chill or unsuitable diet, a catarrh of the gastric mucosa is set up and may become very severe. Occasionally it is due to too high a percentage of fat in the diet, and possibly it may be started by preservatives present in some creams. I feel assured that in certain instances it is due to an infective agent, notably those cases in which there is a coincident ileo-colitis or colitis. It is reasonable to suppose that malnutrition from any cause is a predisposing factor and that the disease may be a sequel of an acute gastritis. I have never seen a really severe case in a breast-fed infant. As I have already stated, the affection is most marked in the first three months of life, and is rarely severe in older infants unless they are small, premature or marasmic. Probably the older and stronger infants, though secreting much mucus, do not vomit so readily and pass it onward through the pylorus.

Any cause which leads to stasis of gastric contents is apt to induce the condition. Hence, it may develop in the course of congenital hypertrophic stenosis of the pylorus.

The *diagnosis* is easy when the vomitus is seen. We must differentiate it from other affections in which there is wasting, vomiting and constipation. I must recall to your notice valuable observations by Drs. R. Miller and W. H. Willcox ('Lancet,' 1907, ii, p. 1670) on "Some Gastric Conditions in Wasted Infants." These observers divided the cases clinically into three groups: (1) Atrophic dyspepsia, or pure marasmus; (2) hypertrophic pyloric stenosis; (3) pyloric spasm, without hypertrophy, or acid dyspepsia. This classification, to my mind, is too narrow and is incomplete. The following one is perhaps better.

Wasting in Infancy.

- (1) Atrophic dyspepsia: ending in marasmus.
- (2) Acid dyspepsia: (a) with pyloric spasm; (b) uncomplicated.
- (3) Pyloric spasm.
- (4) Mucous gastritis.
- (5) Hypertrophy of the pylorus: (a) uncomplicated: (b) associated with gastric catarrh; (c) associated with pyloric spasm.

In simple marasmus Miller and Willcox found that there is no retention of food in the stomach and no mucin. The secretion of acid is diminished, and ferment activity is low. The tongue is furred, and there is a tendency to diarrhoea and vomiting. I must add that there is sometimes associated gastric catarrh and secretion of mucus.

In acid dyspepsia, or pyloric spasm, there is retention of stomach contents, no mucin, an increased acidity, and normal or decreased ferment activity (Miller and Willcox). Pyloric spasm, in my opinion, can occur independently of acid dyspepsia. It is certainly true that acid dyspepsia can occur without pyloric spasm, and the addition of spasm gives rise to confusing symptoms. Thus, the vomiting may be as explosive as in pyloric hypertrophy. It is apt to occur after each feed, and it is unusual for several feeds to be retained. Hence, dilatation of the stomach is slight or absent, and peristalsis is ill-marked and infrequent. Constipation is neither extreme nor persistent, and the child does not waste rapidly. The tongue tends to be clean. A pyloric tumour, if palpable, varies in size under examination.

I have mentioned these details rather fully as I think the affection is sometimes confused with mucous gastritis. J. Lovett Morse ('Amer. Journ. Dis. Child.,' 1911, i, pp. 366-375) describes as pyloric spasm the case of a child, aged 6 weeks, which from the description is what I regard as mucous gastritis. There was much mucus in the gastric contents on lavage and much mucus in the stools. In the discussion on congenital pyloric stenosis, opened by me at Toronto in 1906, I mentioned the possibility that the pylorus "might become blocked by a plug of inspissated mucus, or by swollen mucous membrane, in gastric catarrh." And in the same year Hall recorded such a case, death resulting from gastro-enterostomy at seven months of age. The child had persistent vomiting since birth and only weighed as much as when born. A plug of mucus, due to chronic gastritis, blocked the pylorus, and the intestines were empty. In the case I have detailed there is little doubt that the pyloric obstruction, giving rise to the temporary gastric peristalsis, was due to a similar plug of mucus or to congested gastric mucosa.

It is, however, in the group of cases described as hypertrophy of the pylorus that the greatest danger of error in diagnosis arises. This is obvious on consideration of the results obtained by Miller and Willcox on the examination of the gastric contents of these cases. I do not criticise their results, but I cannot agree with the conclusions they draw. They found that there is retention of food in the stomach, an excess of mucin, a marked increase in ferment activity, and that the acidity is variable and tends to be below normal. The tongue is generally very furred. And they further state that the acidity varies with the amount of gastritis present, and that the gastric abnormalities are modified by regular lavage. It seems clear that these writers are including under the symptomato-

logy of hypertrophic stenosis of the pylorus those due to the gastritis which may be, but is not necessarily, present as a complication. This is the condition I describe as mucous gastritis. It is not present in early stages, and may be absent throughout. Only recently, in a child operated on in the sixth week of life, lavage of the stomach showed that the gastric contents were extremely acid, and that there was no excess of mucus. At operation the typical condition of hypertrophic stenosis of the pylorus was present.

In addition the tongue may be clean throughout, or, at any rate, until secondary gastric catarrh ensues. The gastritis is a complication or a sequel, and the results of gastric examination must be ascribed to the gastritis and not regarded as indicative of pyloric hypertrophy. In mucous gastritis all these signs, except marked retention of stomach contents, may be present and without co-existent pyloric hypertrophy. Whether you call this affection mucous gastritis, catarrhal gastritis, or subacute gastric catarrh, it must be recognised as an affection that is not infrequent in babies at the age when pyloric hypertrophy is common.

Mucous gastritis can be cured by purely medical treatment. The *prognosis* is good even in severe cases if the patient is treated carefully and patiently. No definite improvement can be expected in less than a week or two, and any attempt to increase the quantity or quality of the diet at all quickly is likely to lead to relapse. If, however, these cases are diagnosed as hypertrophy of the pylorus, the result will be an unduly favourable view of the prognosis in pyloric hypertrophy under medical treatment.

In the *treatment* of mucous gastritis I have not found lavage of very great value, except as a temporary expedient for a few days at a time. Sometimes it appears injurious. Nevertheless I recommend it as a measure worthy of trial in all cases in which there is much mucus secreted, using an alkaline lotion for the purpose either once or twice a day. In some cases the frequent administration of small doses of lime-water, bicarbonate of soda or citrate of soda is more beneficial.

The diet must be simple and easily digestible. Cow's milk is curdled very readily, increasing the vomiting and distress. I have obtained the best results from sweet whey powder, a drachm in two ounces of water providing a mixture analytically identical with freshly made whey. It is simpler to prepare than whey, and differs from it in some biological or chemical characters, for it does not so constantly produce the green stools passed by infants fed on whey. Horlick's malted milk and Allenbury No. 1 food have

proved also useful. All these foods are lacking in the antiscorbutic properties of fresh milk. In mild cases diluted peptonised milk can be tried. Asses' milk sometimes agrees. As soon as the worst symptoms have subsided and the secretion of mucus has diminished, small quantities of cream are gradually added to the diet. The diet of cream and whey is gradually replaced by peptonised milk, and then by milk and water or barley-water, or by milk and water with a small amount of Benger's food. Milk-sugar is preferable to cane-sugar. The latter is apt to increase the catarrh. Maltine is beneficial if the child likes it and is much constipated. Citrated milk can be tried when recovery is well advanced. Alcohol is contra-indicated, except in emergencies. Bismuth, especially the liquor bismuthi, is occasionally beneficial, but is more often disappointing. I attach far more importance to diet than to drugs, except in so far that alkalies help to dissolve the mucus and enable it to pass more easily through the pylorus.

CASE OF DERMATO-MYOSITIS IN A CHILD, WITH PATHOLOGICAL REPORT.*

By FREDERICK E. BATTEN, M.D., F.R.C.P.,

Physician, Hospital for Sick Children, Great Ormond Street; and Physician to Out-patients, National Hospital for Paralysis and Epilepsy, London.

INTRODUCTION.

DERMATO-MYOSITIS is a rare condition, and especially so during child-life. I have been unable to find the record of any case of this disease in a child with full pathological examination.

Schüller has described a case of polymyositis in a boy, aged 7 years, which followed on an attack of whooping-cough. The disease reached its acme in three weeks, and in eight weeks the boy was well. Schüller has collected five other reported cases of myositis occurring in children :

(1) Janicke's case, a girl, aged 3 years, a typical case of myositis fibrosa.

(2) Schültze's case, a boy, aged 3 years, with eczema of the arms and atrophy of the muscles, designated dermatomyositis.

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(3) Kösters's case, a boy, aged 8 years, said to be an abortive case of dermatomyositis.

(4) Cassirer's case, a girl, aged 6 years, with muscular atrophy. This case can hardly be accepted as a polymyositis as it was first seen two years after the acute onset.

(5) Oppenheim's case, a boy, aged 8 years, in whom he diagnosed dermatomucoso-myositis, since there was an inflammatory condition of the mouth, gums and tongue, in addition to the skin and muscle affection. Four years later Oppenheim was inclined to regard the condition as a scleroderma.

None of these cases were fatal. Oppenheim records six other cases in adults, in two of which a fatal result occurred, but no autopsy was obtainable. The other cases recovered, some in part, others completely.

Petges and Clejat describe the case of a woman, aged 30 years, who was affected with dermatomyositis for eighteen months before her death. The skin showed atrophic sclerosis and there was general myositis. The connective tissue between the muscle-fibres was most affected, and the authors regard the condition as an interstitial myositis with consecutive atrophy of the muscle-fibres. They consider that the condition is probably of vascular origin. Three illustrations of the skin are given and one of the muscle, but the latter is not of much service for comparison with other sections of muscle.

Pathological features.—The pathological features of dermatomyositis are described by Lorenz as a cell infiltration of the interstitial tissue with a degenerative condition of the muscle-fibre. The muscle-fibres are in part destroyed by œdema, in part by a leucocytic infiltration. The infiltration is most marked in the region of the vessels.

Clinical features.—The symptoms of a dermatomyositis may shortly be stated as follows: There is swelling of the extremities due to the inflammatory œdema of the subcutaneous tissue and muscles, acute pain, muscular rigidity, great tenderness on pressure, and an erythematous rash resembling erysipelas situated over the affected muscle. The character of the rash may vary to a very great extent; it has been described as resembling urticaria, erythema nodosum, or purpura. The onset of the disease is gradual, there is a moderate rise of temperature, rigors are absent. When the acute stage passes off, the skin is left in an indurated and inelastic condition, and the muscles are hard and contracted.

CLINICAL HISTORY.

A girl, aged $9\frac{1}{2}$ years, was admitted into the Hospital for Sick Children, Great Ormond Street, on November the 24th, 1910, being transferred from the Metropolitan Hospital, where she had been for the previous seven and a half months under the care of Dr. Langdon Brown. She had first been seen by Dr. Brown as an out-patient and had been treated as such for six weeks, but as she did not improve she was, about the middle of March, 1910, admitted to the Metropolitan Hospital. When admitted, she had a well-marked erythema, distributed over the face, scalp, and extensor surfaces of the arms, hands, and legs below the knees. This was followed by very extensive scaling of the skin in these situations. In addition the skin, as distinct from the underlying tissue, was swollen, inelastic, hard, and with difficulty separated from the underlying tissue—*i. e.* it could not be picked up. This condition was most marked over the muscles of the thighs, buttocks, calves and lower part of the abdomen and back, but was present also over the triceps, shoulder-muscles and neck. When first admitted to the hospital she could walk a little, but gradually she became so stiff that she could not walk or sit up. Whilst in the Metropolitan Hospital there were periods of exacerbation of her disease, with acute swelling of the muscles and redness of the skin.

I first saw her in June, 1910, while she was still in the Metropolitan Hospital during one of these attacks, and suggested that she was suffering from dermatomyositis.

Patient was the first of five children, the second and third of whom had died of broncho-pneumonia, whilst the fourth and fifth are alive and well. The father and mother are alive and apparently in good health, though the father was said to have Bright's disease. The father was a carman, and lived with his family over a stable where five horses were kept, and to these he attended. The entrance to the rooms was through the stable.

Patient was quite well till the beginning of 1910, when she had her tonsils and adenoids removed. She recovered from this and was well for three weeks. In February, 1910, she first complained of pain in the back, and on the following day the hands and arms were red and swollen. The legs then became swollen and were stiff and painful. During the time she was in the Metropolitan Hospital the temperature ran a slightly elevated course. Patient first came under my care in November, 1910. She was then in a somewhat wasted condition and lay stiffly on her back in bed, unable to move to either

side (Fig. 1). The neck was stiff and could only be turned a little to the right side, and not at all to the left, the back was stiff, the arms could not be raised above a right angle to the trunk, and the elbow could not be straightened beyond a right angle. The wrist moved well, but the fingers remained in a position with permanent flexion of the terminal phalanges. The hip- and knee-joints were stiff and flexed, and could not be fully extended. Within limited range all movements of the joints were free—that is to say, the elbow could be freely flexed and extended within the right angle, but at the right angle it was brought to a stop by the tension



FIG. 1.—Figure of child lying in bed, showing the wasted condition of the muscles and the greatest extent to which the arms and legs could be extended. (For this photograph I am indebted to Dr. B. Wainwright.)

of the biceps muscle. Similarly with the legs, flexion was free, but extension was stopped suddenly by the tension of the hamstrings. There was no evidence of any swelling in or about the joints. The muscles generally were wasted, the biceps were firm and hard, and the other muscles which could be palpated felt very firm. The muscles of the forearm were not flabby, but wasted and hard. The skin all over the body was thickened, and if an endeavour was made to pick up a piece of skin it was found to be greatly thickened and inelastic. The face was puffy, but was not oedematous. Physical examination of the nervous system was quite negative. The knee-jerks and ankle-jerks could not be obtained, but that was probably due to the contracted condition of the muscles. Nothing

abnormal could be found in the heart, lungs or abdominal organs, and the superficial glands were normal. The urine was quite normal except on two occasions—January the 6th and 17th—when the patient, without pain, passed some blood-stained urine. Whilst in the hospital she had acute attacks of swelling of the muscles. In one of these the left adductor muscle became much swollen and hard, and the skin over it red and inflamed. As this did not subside the swelling was explored by a needle, and the fluid which was withdrawn examined both cytologically and bacteriologically. The fluid obtained was sterile and showed no special characters.

A series of examinations were now carried out. The blood was examined and showed no change. There was no eosinophilia. A von Pirquet reaction was done, with a negative result. The cerebro-spinal fluid was examined and was normal. The blood was examined for a Wassermann reaction, with a negative result. X-ray photographs of the chest and muscles were made, with a negative result. No trichina could be found, and there was no evidence of myositis ossificans. Cultures were made from the blood with an entirely negative result. The child had on two occasions passed blood in the urine. The examination of the urine showed the presence of blood-cells, no casts, and a motile bacillus. (The blood was subsequently accounted for by a stone in the ureter found at the post-mortem examination.) Sensation all over the skin was unaffected. The muscles showed a diminished electrical reaction, but no evidence of R.D. The temperature during the six months she was in the hospital never rose above 100° F., except on the two occasions on which blood and pus were found in the urine, and also at the termination, when it rose to 103°–104° F.

Various forms of treatment were tried—salicylates, iodides, mercury, iodopin, fibrolysin, massage, warm baths, etc.—but nothing did any permanent good. Warm baths and massage seemed to improve her most. She preserved her intelligence till the end. She took and digested her food well, and she died from a coli infection arising from the bladder.

During the last six months of life the firmness of the muscles increased and she became much thinner. The abdominal muscles and also those of the back became very firm and tough. She lay with the arms and legs flexed in a half sitting position. She died on May the 21st, fifteen months after the onset of her illness.

The post-mortem examination was performed by Dr. Frew. The body was emaciated, but the subcutaneous fat was present in fair quantity. The brain was not examined; the spinal cord appeared

normal. The skin was firm and hard, and on macroscopical examination did not appear abnormal. The pleura and lungs were normal, except for a slight congestion at the bases. The heart was normal. The liver was firm, and scattered over the surface, under the capsule, were numerous, small, circular, pin-point, yellowish areas, which could be shelled out from the surrounding liver-tissue. On section through the liver similar areas were seen; some were larger and more irregular in shape, the largest being about $\frac{1}{8}$ in. in diameter. The spleen was not enlarged and appeared normal. Both kidneys appeared somewhat congested; the left ureter was dilated and its walls hypertrophied from the pelvis of the kidney to the point at which it crosses the line of the true pelvis, and here it was found to contain a small soft calculus. Below this the ureter appeared normal. The bladder was not hypertrophied; there were several submucous hæmorrhages. The suprarenal glands, the pancreas, stomach and intestines all appeared normal.

The microscopical examination of the skin and internal organs was carried out by Dr. Forbes, whilst that of the central nervous system and the muscles was carried out by myself. The liver showed universal congestion and scattered local areas of cells completely replaced by fat, more marked in the centre of lobules and under the capsule, but also occurring along the periphery of the lobules; the capsule was thickened. The liver also showed cloudy swelling, and by the osmic acid method the fine fat-globules could be easily discerned; the white areas visible to the naked eye were composed purely of fat. No tubercle bacilli or other organism or evidence of cystic parasites could be found in section or in film preparation from the minute nodules. The kidney showed an extensive area of congestion and cell infiltration of the interstitial tissue, most marked in the cortex under the capsule and becoming young connective tissue towards the medulla, causing considerable destruction to the normal renal tissue; the cells of some of the tubules showed fatty changes. The heart muscle appeared normal. The branches of the coronary artery in section showed thickening of the intima by organised fibrous tissue.

The skin on microscopical examination showed definite atrophic changes; the epidermis was reduced in thickness to layers of only two or three cells deep; the cells were stretched and flattened; there was also, in places, complete absence of papillæ. The amount of fat in the subcutaneous tissues was much reduced and largely replaced by fibrous tissue, which extended immediately up to the atrophied epidermis. The subcutaneous tissue was poorly supplied

with blood-vessels; the majority of those seen were completely occluded, showing in transverse section the appearance of small fibrous nodules; others showed hyaline degeneration of the vessel walls.

The examination of the spinal cord was carried out by the Marchi, Weigert-Pal, Van Gieson and Nissl methods, with a negative result. The median nerve was also examined and appeared normal. Several muscles were examined: the left biceps of the arm showed in its central portion well preserved muscle-fibres of normal appearance



FIG. 2.—Transverse section of muscle showing: (a) normal muscle-fibres towards the centre; (b) atrophied fibres towards the periphery; (c) a vessel the walls of which are infiltrated with lymphocytes.

and size; all round the periphery there was marked atrophy of the muscle-fibres, and the nearer the periphery the more degenerate the fibres, so that in the outermost bundles practically no muscle-fibres remained (Fig. 2). The peripheral portion of the muscle where it is covered by tendon did not show this atrophy, but at the points where the septa of the muscle ran in from the periphery the atrophy of the muscle-fibres extended into the substance of the muscle. In the most peripheral portion of the muscle practically no muscle-fibres were present, and the bundles were replaced by darkly stained nuclei, probably representative of the nuclei of the sheath of the muscle-fibres (Figs. 3 and 4). In some parts these nuclei have to a great

extent disappeared, and all that remained was connective tissue with a few nuclei. At certain spots, generally in close relation to vessels, there were accumulations of small round cells (lymphocytes) (Fig. 5). These cells were more frequent around the veins than around the arteries; sometimes they lay in the muscle apparently quite away from the neighbourhood of the vessel. The abductor muscles of the

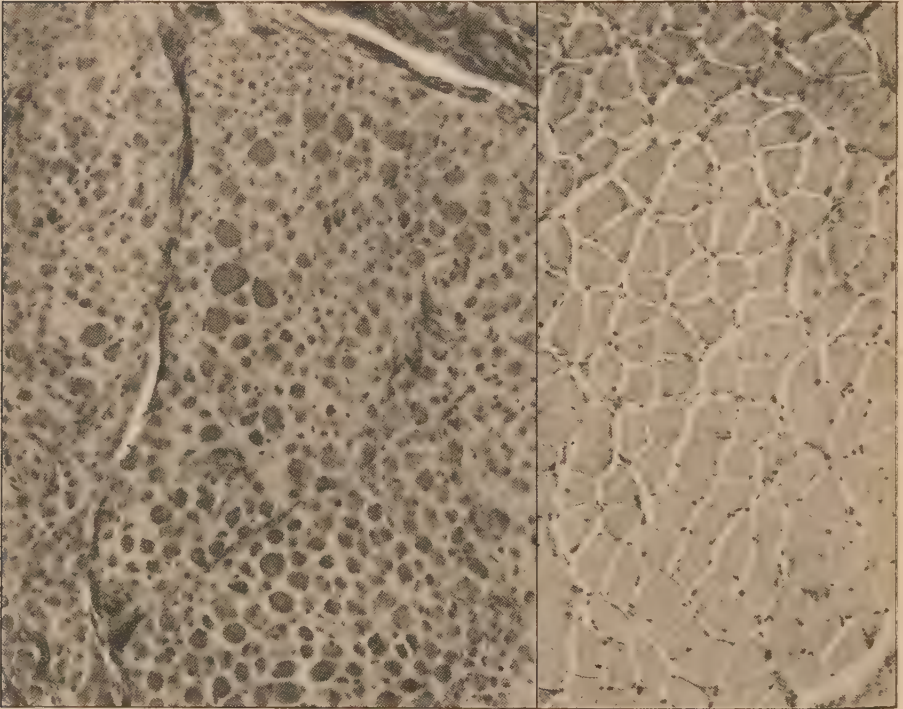


FIG. 3.

FIG. 4.

FIG. 3.—Section of peripheral portion of muscle, showing the marked atrophic condition of the fibres. It will be noted that in some parts the muscle-fibres have almost disappeared, and the amount of interstitial tissue is small.

FIG. 4.—Normal portion of the same muscle photographed under the same magnification.

thigh showed the same change, only in a more marked degree, and the change was not so limited to the peripheral portion of the muscle, the inflammatory process extended inwards, along the septa between the muscle bundles to a greater extent than in the biceps. The rectus abdominis showed similar change, the superficial layers of the muscle-fibres being affected, whilst the deep layers escaped. The left rectus femoris showed less change. The biceps femoris,

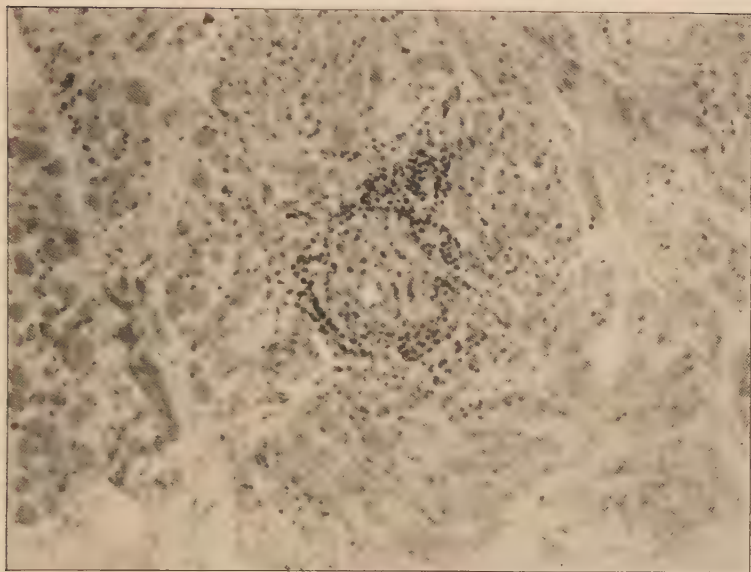


FIG. 5.—Section of vessel showing lymphocytic infiltration of the walls of the vessel and the surrounding tissues. The vessel wall is thickened.

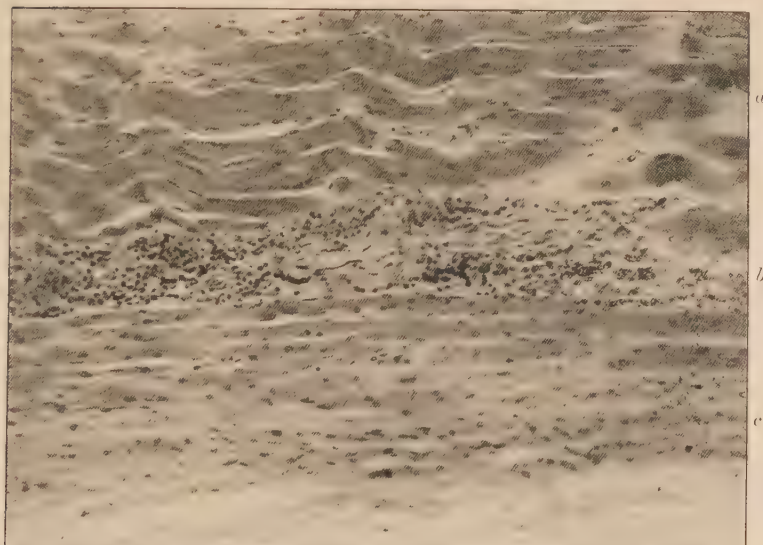


FIG. 6.—Longitudinal section of muscle showing (a) normal muscle-fibres; (b) infiltrated vessel-wall; (c) various degrees of atrophy of muscle-fibres.

again, showed more atrophy of the same kind as has been described in the other muscles; the perivascular exudation was well seen around the vessels. The erector spinæ muscles showed little or no change; the left triceps showed a degree of atrophy similar to that of the biceps; the pectoralis major muscle was relatively well preserved; the diaphragm on the whole was well preserved, but some bundles of muscle near the surface showed a moderate amount of fibrosis (Fig. 6).

Vessels.—The walls of the arteries were greatly thickened, some of the vessels were surrounded by small round cells, and in others the lumen of the vessels was entirely obliterated, and the vessels obviously occluded. In all the vessels examined there was an undue thickening of the coats.

COMMENTARY.

There are various points in the above case which call for comment. The diagnosis dermatomyositis was based partly on positive signs and partly on the absence of evidence of affection of organs other than the skin and muscles. The positive signs were the character of the affection of the skin, the concomitant affection of the subjacent muscles, the periodic attacks of acute swelling of muscles and redness of the skin, and the subsequent induration of the skin and muscles after the subsidence of the acute attacks.

The negative signs were the absence of any evidence of affection of the joints, of the blood, of the viscera, or of the nervous system, and in addition to these the absence of any sign of syphilis, tubercle, *Trichinella spiralis*, and any form of organism capable of being cultivated on the ordinary media.

The diagnosis was confirmed by both macroscopic and microscopic examination in that no evidence of any disease of the visceral organs (except such slight changes as have already been mentioned in the substance of the paper) or of the nervous system was found, and the changes found were limited to the skin, subcutaneous tissues and muscles.

The most striking point with regard to the changes in the muscles is that it is the superficial portion of the muscles which have suffered, whilst the deeper portion of the muscles has escaped.

Those parts of the muscles which are separated from the subcutaneous tissues by a thick tendinous sheath escape affection, whilst those muscle-fibres which lie in close contact with the subcutaneous tissues and along the intermuscular septa are liable to be affected.

The perivascular infiltration of the vessels with small round cells is a striking feature, as is also the thickening of the walls of the vessels and in some cases the actual obliteration of the vessels.

The infiltration of the muscle-fibres with lymphocytes also occurs, and gives rise to the occurrence of "lymphorrhages." These occur for the most part in close connection with the vessels, but a few such lymphorrhages can be found which do not appear to have any direct connection with the vessels.

The change in the muscle would seem to be due partly to œdema and partly to the cutting off of the blood supply to the fibres—the amount of interstitial tissue between the fibres is small when compared to that found in such a condition as myopathy.

CONCLUSION.

There is no doubt that the case belongs to the condition described under the name "dermato-myositis." What the cause of this condition may be has yet to be proved. It seems certain that the present case was not due to syphilis, tubercle, *Trichinella spiralis*, or any known microbial infection, but probably was due to some toxin of exogenous origin. This toxin may be of such a character that it can only be discovered by animal inoculation. Cases of dermato-myositis are rare; but should further opportunity arise an endeavour will be made to investigate the nature of such cases by the inoculation of animals. The fact that this child lived in close proximity to horses rather suggests that the infection may be conveyed from these animals.

BIBLIOGRAPHY.

- BATTEN.—"Myositis," Allbutt and Rolleston's 'System of Medicine,' 1910, vii, p. 3.
 LORENZ.—"Muskel-Erkrankungen," I Theil: Nothnagel, 'Spec. Path. u. Therap.,' xi, III Theil, 1 Abth., p. 160.
 MARINESCO.—"Maladie des Muscles," Brouardel et Gilbert, 'Nouveau Traité de méd. et de Thérap.,' Par., 1910, xxxviii, p. 136.
 OPPENHEIM.—"Polymyositis," 'Berl. klin. Wochenschr.,' 1903, xl, p. 381.
 PETGES ET CLÉJAT.—"Sclérose Atrophique de la peau et Myosite généralisée," 'Ann. de Derm. et de Syph.,' Par., 1906, vii, p. 550.
 SCHÜLLER.—"Polymyositis in Kindesalter," 'Jahrb. f. Kinderheilk.,' Berl., 1903, lviii, p. 193.

PNEUMOCOCCAL PERITONITIS IN CHILDREN.

By HECTOR CHARLES CAMERON,

Assistant Physician, and Physician-in-Charge of the Department for Diseases of Children, Guy's Hospital.

IN children, and especially in little girls, one of the most common of the aberrant forms of pneumococcal infection is that in which the peritoneum is involved. The exact route by which the micro-organism reaches the peritoneum has been disputed. Cases to which I shall refer later seem to show that in some instances at least the organism reaches the peritoneum by passing through the bowel-wall, which is already the seat of a pneumococcal enteritis. It has further been suggested that in some cases the infection is by direct spread through the diaphragm, from an area of pneumonic consolidation in the lung. It does not, however, seem necessary to adopt a separate explanation for the infection of the peritoneum. Infection of the meninges, of the joints, of the endocardium, and of the middle ear is probably always directly from the blood-stream, and it would seem reasonable to conclude that the source is the same in most cases of peritonitis.

Pneumococcal peritonitis is by no means a rare disease. Between 1903 and 1911 at least twenty-four cases have been admitted to Guy's Hospital in which the diagnosis has been confirmed by bacteriological examination. In many cases which might otherwise have been included no bacteriological examination was made, and I have no doubt that the disease is much commoner than is suggested by these figures. Rischbieth, in 1911, in an interesting paper* was able to report a series of fifty-seven cases in children from the Great Ormond Street Hospital for Sick Children and from the London Hospital, in about half of which a bacteriological examination was made. Many very large series of cases have been published on the continent.

That the number of cases appearing in the records of hospitals is smaller than the commonness of the disease warrants is no doubt due to the considerable difficulties which the diagnosis has presented. The disease may come under observation at various stages and with very different symptoms, so that it may simulate closely such diverse conditions as typhoid fever, acute gastro-enteritis, appendicitis, and tuberculous peritonitis.

If, as I believe, there are many cases of pneumococcal peritonitis

* 'Quart. Journ. Med.,' Oxford, 1911, iv, pp. 205-231.

in which it is unwise to perform immediate laparotomy, it becomes necessary that we should be able promptly to distinguish pneumococcal peritonitis from peritonitis due to other causes, and especially from peritonitis due to appendicitis.

Very little attention is paid to this differential diagnosis in text-books of medicine and of the diseases of children, and there is, I believe, a tendency to regard the mistaken diagnosis as inevitable, and to look upon pneumococcal peritonitis as a condition which is only disclosed when at a laparotomy the appendix, which was about to be removed, is found to be normal. I believe that a somewhat closer study of the symptomatology will render the similarity between pneumococcal peritonitis—a condition of general septicæmia culminating in diffuse infection of the whole peritoneal cavity—and appendicitis—a local inflammation without septicæmia—much less apparent.

Pneumococcal peritonitis occurs almost entirely in youth. Of twenty-six cases collected from the 'Guy's Hospital Medical Reports,' the following table shows the age and sex.

Nineteen females.			Seven males.		
Age.	No.		Age.	No.	
27 years	1 case	.	22 years	1 case	.
20 "	1 "	.	18 "	1 "	.
15 "	2 cases	.	16 "	1 "	.
14 "	1 case	.	10 "	1 "	.
11 "	1 "	.	4 "	1 "	.
9 "	1 "	.	3 "	1 "	.
8 "	5 cases	.	2 weeks	1 "	.
6 "	3 "	.			
5 "	2 "	.			
3 "	1 case	.			
2 "	1 "	.			

These figures, compiled from cases seen at a general hospital, do not, however, show, as Rischbieth's do, how common the disease is in the first few years of life. In the present series fifteen out of nineteen cases in females occurred between the ages of five and fifteen.

DIFFERENTIAL DIAGNOSIS BETWEEN PNEUMOCOCCAL PERITONITIS AND PERITONITIS DUE TO OTHER CAUSES.

In childhood the only common forms of peritonitis besides pneumococcal peritonitis may be said to be those due to appendicitis, to gonorrhœal infection, and to streptococcal infection.

Gonorrhœal infection may be readily detected by an examination of the vagina and vulva and by a bacteriological examination of the discharges.

So-called "primary" streptococcal peritonitis is rare; but can hardly be distinguished from that due to the pneumococcus. In both it is commonly a complication of septicæmia. It results sometimes from infection of the umbilical cord in the newly born; occasionally it follows scarlet fever or terminates chronic nephritis. Rarely it complicates erysipelas in young infants, when it may be associated with œdema of the lower extremities. Such infections of the peritoneum are probably always fatal.

In early life, peritonitis due to infection of the urinary or biliary passages, to suppuration in a mesenteric or retroperitoneal gland, to perforation in typhoid fever, or to perforation of a gastric or duodenal ulcer, is so rare that it may almost be excluded from consideration.

The diagnosis between peritonitis due to appendicitis and peritonitis due to pneumococcal infection depends upon the evidence in the latter condition of the presence of a septicæmia. This shows itself in the feeling which we often have when we stand by the side of a case of pneumococcal peritonitis, that the patient is, in general, more ill than can be accounted for by the degree of peritonitis present.

Often there is evidence of infection in other parts, either antecedent or simultaneous, so that it may be possible to say with certainty that in addition to peritonitis there are other infections present such as pericarditis, pleurisy, or pneumonia. In such cases of multiple localisation the prognosis is undoubtedly more serious. Of the Guy's Hospital cases only one recovered.

Even when there is no evidence of the involvement of lung and pleura, the aspect of the patient is often that familiar in pneumonia, with grunting respiration and *alæ nasi* working vigorously. In five of the Guy's cases herpes labialis was present; in others the onset was with rigors, shivering or convulsions. Where a leucocyte count was made high leucocytosis was present. An early and copious exudation of lymph is characteristic, and in several of the Guy's cases it is noted that soon after the onset of symptoms of peritonitis the signs of free fluid in the peritoneal cavity were apparent. In two cases seen recently the temperature, within a few hours of the onset of severe abdominal pain and vomiting, was above 104°F. In not a few cases symptoms of some days' duration—in one case of three weeks' duration—had preceded the violent abdominal pain which marked the onset of the peritonitis. Among

such symptoms were pyrexia, shivering, vomiting, sore throat, and attacks of colic, and they serve to indicate that the general pneumococcal infection had preceded by some time the involvement of the peritoneum. In three cases which I have seen lately, to two of which I was called on successive nights, there was evidence that the peritonitis had spread from an ulcerative enteritis which had been in existence for some days before the onset of peritonitis. In others diarrhœa has been a prominent symptom. The following case I have selected, although it occurred in a young adult, because it illustrates well some of these points—the preceding colic, diarrhœa, and colitis, the shivering, the high temperature at the onset of peritonitis, and the rapid exudation of fluid. It serves to illustrate also a point to which I shall refer later, the apparent futility of immediate laparotomy.

E. S—, a female, aged 20 years, was admitted to Guy's Hospital on November the 11th, 1911. On the 8th she had felt ill, and had had abdominal pain, diarrhœa and shivering. On the 9th she stayed in bed, but on the 10th and 11th she felt better and went back to work. On the afternoon of the 11th she was suddenly seized with much more severe abdominal pain and vomited. On admission at 10 p.m. her temperature was 104° F. The abdomen moved badly and the muscle over the appendicular region was rigid. I saw her at 11 p.m. and got Mr. Hughes to operate. The wall of the cæcum was stiff, infiltrated and rigid, and there were a few flakes of lymph beginning to form on the peritoneal coat. The appendix was healthy. I recognised the condition as one of pneumococcal ulcerative colitis and gave a bad prognosis. She died thirty hours later, and that time had been sufficient for the whole peritoneal cavity to have become filled with thick purulent-looking lymph. There was acute and extensive ulceration of the cæcal mucous membrane. A pure growth of pneumococcus was obtained from the pus.

In this case there was rigidity of the musculature over the cæcum, which was in reality the only point in which the simulation of appendicitis was at all close. In one other case I have seen a similar local rigidity.

The more remote history of the patient may be suggestive. In a case seen in consultation the child had recently had pneumonia and the mother was convinced that the illness was the same. The predisposition of the individual to pneumococcal infections may be very great. A history of previous attacks of appendicitis may also be of weight in the diagnosis.

From a consideration of these points the age and sex, the onset with rigors, convulsions or herpes labialis, the early appearance of

delirium or of pronounced diarrhœa, the simultaneous presence of pleurisy, pericarditis or pneumonia, the history of repeated attacks of lobar pneumonia, the evidence of antecedent colitis, the great and rapid exudation of fluid into the peritoneal cavity, the high temperature at the onset, the marked leucocytosis, the want of localisation of pain and rigidity to the right iliac fossa, it is often possible to make a diagnosis with certainty between appendicitis and pneumococcal peritonitis.

STAGES OF PNEUMOCOCCAL PERITONITIS.

In pneumococcal peritonitis it is possible to recognise three stages :

(1) A stage of onset, in which all the symptoms set in with great violence, and in which, in many cases, death occurs. In cases seen at this stage the diagnosis is to be made from perforative peritonitis or from acute gastro-enteritis. In many cases there is truly an enteritis present as well as the septicæmia, but the leucocytosis and the height of the temperature should serve to distinguish the double condition from one of uncomplicated gastro-enteritis.

(2) If the patient survives the onset, after some hours or days there is usually considerable improvement in the general condition, and a retrogression of all symptoms. The pyrexia usually continues for some two or three weeks, during which time a diagnosis of typhoid fever may be suggested. The greater intensity of the abdominal pain, the persistent vomiting, the high leucocytosis, and the presence, in some cases, of evidence of free fluid in the abdominal cavity, should prevent this mistake.

(3) Lastly, after recovery from the pneumococcal septicæmia, a residual collection of pus—often subdiaphragmatic, sometimes, however, filling the whole peritoneal cavity—is usually left behind, just as an empyema may complicate convalescence from lobar pneumonia. Such a condition seen for the first time is likely to be mistaken for a case of tuberculous peritonitis with local or general effusion. Moreover, the pneumococcal abscess tends, like that due to tuberculous peritonitis, to point near the umbilicus. It would seem, however, that when such an umbilical fistula appears after pneumococcal peritonitis, it may be formed with much greater rapidity than is common in tuberculous peritonitis.

I find notes of four patients who were admitted with such residual collections of pus in the abdominal cavity after recovery from the pneumococcal septicæmia in their own homes. One of these was an adult, the remaining three children.

A boy, aged 10 years, was admitted for abdominal pain and swelling

with diarrhoea which had begun suddenly three weeks before. He improved rapidly, a diagnosis of tuberculous peritonitis was made, and he went home. Seven months after discharge from hospital he was readmitted under Dr. Hale White in an emaciated condition and with pus escaping from a fistulous opening at the umbilicus. During the interval he had suffered severely from intermittent abdominal pain. The opsonic index to tubercle was 0.83, and tuberculin treatment produced no improvement. Dr. Hale White, noticing that the pus was free from faecal odour, had a cultivation made, and a pure growth of pneumococcus was obtained. A vaccine was prepared and administered and he went out eight months later in good health.

A girl, aged 5 years, six weeks before admission had had an illness in which at first appendicitis and later pneumonia were diagnosed. On admission the abdomen was swollen and contained fluid. The opsonic index to tubercle was 1.2. A diagnosis of tuberculous peritonitis was made and the child was treated in the open air. Three weeks later a swelling rapidly appeared at the umbilicus and laparotomy was performed. As soon as the peritoneum was opened pus, from which a pure growth of pneumococcus was obtained, poured out; three pints were collected. Recovery thereafter was rapid.

A girl, aged 8 years, had an acute illness of many weeks' duration, in which a diagnosis of typhoid fever was made. After eleven weeks free fluid was discovered in the abdomen and a fistula formed at the umbilicus. She was then admitted under Dr. Taylor. A laparotomy was performed and a pint and a half of greenish-yellow pus escaped. The child was well two years later.

Such cases must suggest the possibility that occasionally pneumococcal peritonitis may occur and recovery take place without laparotomy and without the formation of any residual abscess. In such cases the diagnosis must, of course, always remain doubtful, but I offer the following as an instance of such recovery. A girl, aged 15 years, was admitted under Dr. French's care with vomiting and abdominal pain of two days' duration. The abdomen was swollen, rigid and tender. In both flanks there was dulness, which shifted on rolling the child over. There was herpes labialis. The temperature was high, between 102° and 104° F., and the pulse rapid. There was a leucocytosis of 15,600. Cultivation from the herpetic vesicles gave a growth of *Staphylococcus albus*. The abdominal pain and vomiting diminished after four days and the child ultimately made a good recovery.

TREATMENT OF PNEUMOCOCCAL PERITONITIS.

The treatment of pneumococcal peritonitis commonly advised is by immediate laparotomy and the establishment of drainage. Against this procedure as an invariable practice I would urge the following objections:

(1) In pneumococcal peritonitis there exists no focus of infection which can be extirpated as in appendicitis. In those cases in which there is an acute local enteritis—and they appear to be relatively uncommon—the condition of the gut is not such as to encourage attempts at excision.

(2) The peritonitis is always in the first instance a diffuse general peritonitis involving the whole peritoneal cavity to its furthest recesses. Such a general infection renders efficient drainage almost an impossibility.

(3) It is by no means certain, even if it were possible to drain off the exuded lymph, that it is wise immediately to attempt to do so. The lymph not improbably has a protective function and diminishes the absorption of toxins. In what I have called the second stage of the illness, which coincides with the copious exudation of lymph, there is often in favourable cases an amelioration of all toxæmic symptoms.

(4) The disease in the early stages is essentially a septicæmia and the danger is in proportion to the virulence of the general infection. Death may occur within a few hours of the time at which the local infection of the peritoneum takes place and while the peritoneum itself is involved to but a small extent. The following case in a young man illustrates this point.

J. S—, aged 22 years, while on holiday in Ireland, developed a chill, with shivering, abdominal pain and diarrhœa. He felt so ill that he came home to London on August the 8th. He stayed in bed for three days. On the 12th he walked to Guy's Hospital and was seen in the out-patient department. His temperature on admission was 104° F., his pulse 120. A diagnosis of appendicitis was made and Mr. Turner operated. On opening the peritoneum some blood-stained serum escaped; the appendix, which was red and inflamed, but not perforated, was removed. Within twelve hours the patient died. I performed the autopsy, and found that the cæcum and the first six inches of the ascending colon showed an acute follicular colitis. The wall of the gut was so œdematous as to pit on pressure. The glands by the cæcum were congested and in one there was a hæmorrhage. There was a little recent peritonitis

around the cæcum and the stump of the appendix. Over the upper left lobe of the lung there was a thick layer of yellow lymph. I think this was undoubtedly a case of pneumococcal septicæmia and colitis, in which death occurred at the onset of peritonitis. Cultivation from the peritoneum unfortunately gave only a growth of *Bacillus coli communis*, by which the pneumococcus is not infrequently overgrown.

If immediate laparotomy is practised the operation may be done before the sudden exudation of lymph has taken place, as in the case just mentioned and in the case of E. S—.

(5) In some instances, as we have seen, patients have been allowed to survive the acute peritonitis and the septicæmia in their own homes without operative interference, and have presented themselves with a residual abscess, usually subdiaphragmatic, drainage of which has been followed by a complete recovery. In these cases the diagnosis has commonly been in the early stage that of appendicitis, or pneumonia, or typhoid fever; in a later stage tuberculous peritonitis is simulated. To compare with these I have examined the results of immediate laparotomy at Guy's Hospital. Eight cases admitted in the acute stage, for one reason or another, were not operated on before death. In seven of these, pleurisy, pneumonia, peritonitis or endocarditis or a combination of these were present as well as peritonitis. The eighth case died as soon as admitted. Twelve cases were immediately submitted to laparotomy. Nine of these died, four on the day following operation, the remainder within a few days. Three cases recovered, but in none is it possible to trace any immediate benefit from the operation. All passed through a long and tedious illness, marked by a persistent high temperature and rapid pulse, developed in convalescence the signs of abdominal abscess, and only recovered after a second operation by which the pus was evacuated. No case recovered as a result of immediate laparotomy without the formation of residual abscesses and without the necessity for a second operation. Such a clinical course presents a close analogy with the train of events in pneumococcal septicæmia with the more usual localisation in the lung followed by an empyema.

For these reasons I think that, although ultimately laparotomy and drainage of a residual abscess almost invariably become necessary, it is unwise to submit all patients to immediate laparotomy as a matter of routine. No doubt there are many cases in which at the onset the violence of the toxæmia is such that early death occurs under any circumstances, whether laparotomy is performed or not. There are others in whom unnecessary and premature inter-

ference is able to turn the scale against recovery. I suggest that in most cases the better plan is to wait, to place the patient in a sitting posture, to apply ice to the abdomen, to give morphia, and to endeavour to combat toxæmia by saline infusion. The choice of the time for operation is a matter requiring the nicest judgment. In many cases at the end of the second week or in the third week the curve of the temperature chart will show a change, and the high continued pyrexia will be replaced by a remittent or intermittent fever. When this occurs a daily examination should be made for evidence of a subdiaphragmatic abscess. It may perhaps be argued that to decide not only that peritonitis is present, but that the peritonitis is due to the pneumococcus, places too great a strain upon our powers of diagnosis, and that to attempt to do so will result from time to time in a disastrous refusal to operate in cases of septic peritonitis due to appendicitis or other causes. I believe, however, that a closer study of the symptoms of pneumococcal peritonitis and an appreciation of the part played by the accompanying septicæmia will enable us in a majority of cases to make a diagnosis with complete certainty. If it is recognised that the diagnosis is necessary for the benefit of the patient, I believe that it can be made.

It would appear that the cases of peritonitis which recover are those which pass successfully through the pneumococcal septicæmia. After the termination of the acute septicæmia only a minority of cases die as a result of failure to secure drainage of the residual collection of pus. This was, however, the cause of death in the last case to which I should like to refer, that of a girl, aged 11 years, who was admitted on October the 10th, 1911, with pneumococcal peritonitis, so ill that operation was delayed. She was almost comatose with incontinence of urine and fæces and seemed on the point of death. She improved greatly for three weeks, when a left subdiaphragmatic abscess was opened. Three further operations had to be performed to drain abscesses. After the last of these, unfortunately, a faecal fistula formed, and the child gradually sank and died on December the 20th. For many weeks it seemed likely that she would recover; for three weeks before death the temperature had been normal. That she would have died at once if operated on on the day of admission is, I think, certain.

The Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, April the 26th, 1912.

Dr. G. A. SUTHERLAND, *President, in the Chair.*

Bony Growth on the Skull.—Mr. O. L. ADDISON.—Girl, aged 5 years. The swelling on the head was first noticed a fortnight after birth, and has gradually increased in size. There is a bony swelling the size of a pigeon's egg on the frontal bone just to the right of the middle line and continued as a ridge, gradually decreasing in size for two inches or more downwards and forwards to the temporal fossa. X-ray photograph shows the swelling to consist of cancellous bone.

Exostosis of the Inner End of the Clavicle.—Mr. O. L. ADDISON.—Girl, aged 11 years and 9 months. The swelling, only recently noticed, is said to be getting larger. On the anterior surface of the inner end of the left clavicle is a bony swelling the size of a horse-bean. The sternomastoid muscle moves freely over the tumour. An X-ray photograph does not show the tumour, but a large cervical rib is well shown on the left side and a smaller one on the right.

Destruction of the Uvula in Vincent's Angina.—Dr. J. D. ROLLESTON.—Girl, aged 6 years, showing loss of uvula and anterior pillars and portion of soft palate and tonsils. Free margin of soft palate presents depressed pale area of scar-tissue. Voice nasal. No difficulty in swallowing.

Admitted to Grove Hospital on January the 31st, 1912, certified to be suffering from diphtheria on the seventh day of disease. Deposit on left tonsil: 8000 units of antitoxin given.

February the 1st.—Ulceration of left tonsil and left side of uvula. A few organisms resembling diphtheria bacilli in culture; numerous cocci. February the 4th.—Ulceration of tonsil and uvula more marked. Vincent's organisms in smear.

In spite of various local measures successively adopted—viz. syringing with solution of potassium chlorate and lavender, application of methylene-blue powder, and painting with tincture of iodine—the ulceration advanced and was accompanied by much fetor, dysphagia, prostration, and insomnia. From February the 2nd to February the 20th the temperature was always above 102° F., and on February the 11th was 105.2° F. On February the 14th the uvula was entirely destroyed. The larynx was not affected. On February the 23rd local and general improvement occurred and cicatrisation rapidly took place. Vincent's organisms were still present in the throat smears on February the 22nd, but none were found on March the 2nd.

The voice long remained very indistinct and nasal, but gradually became clearer. From March the 1st to March the 9th there was some regurgitation, but none has been noticed since. Wassermann's reaction on March the 16th (Dr. Cartwright Wood) was positive, but became negative on March the 30th, without anti-syphilitic treatment. Beyond a trace of albumin in

the urine from February the 11th to February the 19th no complications occurred. The knee- and ankle-jerks remained active, and there was no sign of diphtheritic paralysis.

Discharged in good health on April the 5th. There is a slight degree of congenital ptosis of the left upper lid, but there is no family or personal history of syphilis.

A Case of Morbus Cordis.—Dr. F. J. POYNTON.—Boy, aged 10 years, originally came to hospital on account of vague, aching pains "all over," with some shortness of breath on much exertion. No other symptoms of any kind. No history of frequent sore throats, rheumatic fever, chorea, or any grave chest illness. Only physical signs of any abnormal character are to be found in the heart, which is apparently displaced considerably to the right, the major portion of it lying to the right of the middle line. A systolic thrill and diastolic shock are palpable at the second right costal cartilage, and here, too, upon auscultation are to be heard the only abnormal auscultatory physical signs—a rather shortened first sound followed by a systolic murmur, conducted up into the neck. The second sound is accentuated and followed by a very faint diastolic murmur conducted down the sternum to the left. The pulse is not "Corrigan" in type, and it is doubtful whether capillary pulsation is present in the lips. There are no other abnormal physical signs.

Skiagrams show that the heart, though to the right, is not transposed, and that there is no material enlargement of the left ventricle.

The case presents several interesting problems of diagnosis.

Rachitic Dwarf.—Dr. F. J. POYNTON.—A boy, aged 11 years and 11 months. Birth: Full term; normal labour; pigeon-chested at birth. Feeding: Breast for a fortnight, then Nestle's milk up to one year. Early history: Much bronchitis as a baby; head sweated profusely. Walked at the age of 15 months. Grew till four years of age, but was quite small for his age, and was not breeched till that age. He has not grown much since. Three fits when teething; constipated as a baby. Scarlet fever at the age of 8 years; no other illness. Four sisters; neither they nor parents rickety.

Present condition: Height 3 ft. 2 in. (should be 4 ft. 6 in.). Weight 3 st. 3 lb. (should be 5 st. 6 lb.). Cranial circumference, $20\frac{1}{4}$ in.; skull square, not bossed. Curves of long bones exaggerated; spade-like hands and feet. Scoliosis. Beaded ribs; keeled sternum. Harrison's sulcus; angulus Ludovici prominent. Muscles very well developed. Heart and lungs normal. Liver and spleen not palpable.

Gumma of the Lung.—Dr. D. FORSYTH.—Boy, aged 10 years, is the sixth of eight children, his birth being preceded by two miscarriages. One of the children died jaundiced at six weeks, another is deformed by spinal caries. The patient himself had no medical history of any interest until two years ago, when he attended St. Thomas's hospital for a swelling just above his left knee. This, after being X-rayed, was treated and disappeared, though afterwards the boy limped for a time. One year ago he developed interstitial keratitis in both eyes, the left cornea becoming permanently damaged. A couple of months ago, the keratitis recurring in the right eye, he came under the care of Mr. McMullen at the Royal Westminster Ophthalmic Hospital, who, preparatory to injecting salvarsan, sent the child to me on account of the condition of his chest.

On examination the boy was pigeon-breasted, with the following physical signs, suggesting a solid mass in the right chest: Right chest—lateral expansion defective, percussion note impaired in first space, dull at second rib down to fourth space; resonance begins again under fifth rib whence to liver dulness at seventh rib (nipple line) the note is resonant. Over the dull area the vesicular murmur as well as the vocal fremitus and vocal resonance are absent. Behind, the note is impaired opposite the first dorsal spine, becomes duller at the second, and resonant again at the fourth; breath-sounds from the first to the eighth spine rather faint and high pitched, though at the base they are heard better again; vocal fremitus is diminished and vocal resonance diminished and rather nasal on this side. The left lung and the heart are normal.

As the X-ray photograph by Dr. Ironside Bruce shows, the right chest contains, apparently about the hilum of the lung, a large, fairly sharply outlined mass occupying a position corresponding to the physical signs. This mass, though continuous with heart and aorta, does not pulsate nor in any way displace the heart.

The Wassermann reaction is positive.

Since coming under observation the boy has not lost weight, has had no cough and no sputum, but has run a slightly irregular temperature between 90° F. and 100° F.

Tumour on the Back.—Mr. O. L. ADDISON.—The specimen is a hemispherical tumour $1\frac{1}{2}$ in. in diameter, removed from a case shown at the meeting of the Section on April the 28th, 1911 (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1911, viii, p. 260). The convex surface is covered with skin. From the centre of this surface a small sinus, $\frac{1}{2}$ in. in length, passes inwards, to open into a thin-walled cyst $\frac{1}{4}$ in. in diameter, containing a viscid opaque white fluid. Above this cyst is situated a larger multilocular thin-walled cyst $\frac{1}{2}$ in. by $\frac{3}{4}$ in., containing the same kind of fluid. Below is an irregular plate of bone, roughly triangular in shape, $1\frac{1}{8}$ in. in length and $\frac{3}{8}$ in. broad at its widest part. The bone is thin at the centre, has thick, rounded margins, and is covered with a thin layer of cartilage. The whole is embedded in a mass of subcutaneous tissue.

Mucous Gastritis in Infants.—Dr. E. CAUTLEY (*vide* p. 241).

Philadelphia Pediatric Society.

Joint Meeting with the Philadelphia Obstetrical Society, April the 9th, 1912,
THEODORE LE BOUTILLIER, M.D., President.

SYMPOSIUM ON MATERNAL NURSING.

The Ability of Mothers to Nurse their Offspring.—Dr. J. F. CROZER GRIFFITH, who quoted a great mass of statistics, showed the high mortality-rate in the first year of life and its dependence upon the employment of artificial feeding. He discussed three questions: the number of mothers who nursed their offspring; the number capable of nursing; and the cause

of the failure of women to nurse their infants. The statistics quoted show that, although there had been a decided diminution in the frequency of nursing formerly, there was now an increase in the number of babies fed upon the breast. In the majority of cases there was not so much a lack of ability as a lack of willingness to nurse their offspring.

The Preparation for Nursing and the Care of the Nursing Mother.—Dr. E. P. DAVIS, by invitation, said that there might be anatomical defects in the nipple. Gentle pressure would evert a sunken nipple, and was better than the use of a breast-pump before delivery. Congenital cleft or fissured nipples should be treated by cleansing and an antiseptic ointment. Massage of the breast of pregnant women was not advisable. The greatest obstacles to successful lactation were a disordered nervous system and the toxæmia of pregnancy due to failure of the ductless glands to act. For the latter, small doses of thyroid extract should be given over long periods during pregnancy. The essentials of diet during pregnancy were milk, fruit and bread. During labour, sepsis, hæmorrhage and exhaustion must be avoided. To promote lactation the mother should nurse the infant at regular intervals, two and a half to three hours; should have much fluid, but no alcohol; and good, digestible food. Arsenic was the best tonic. A well-supporting breast bandage was recommended.

The Treatment of Mammary Disease without the Discontinuance of Breast-Feeding.—Dr. BARTON COOKS HIRST, by invitation, showed a series of plates of the common and rare diseases of the breasts, and discussed the treatment of each.

Methods of Increasing the Mammary Function and Contra-indications to Nursing.—Dr. M. H. FUSSELL said that many so-called contra-indications to nursing existed only in the minds of the laity. Social duties were no reason for not nursing a baby. No duty was superior to rearing a healthy child. Physical inability to nurse was generally imaginary. Cleanliness and care would prevent infection of the nipples. Mastitis required rest from nursing for a time only. Former inability to nurse a baby was no reason for not nursing a later infant. Illness and failure to secrete milk needed careful treatment by fresh air, exercise, diet, etc. The baby must be nursed at regular intervals; the mother must be shielded from fright or excitement; daily exercise and rest were important; so was the diet. While in a few instances infants might have to be weaned, the majority of mothers could nurse their offspring with care, firm conviction and persistence.

Dr. R. C. NORRIS, in opening the discussion, said that the matter of infant feeding very properly passed out of the hands of the obstetrician early and the responsibility rested upon the pædiatrist. So far as the ability of the woman to nurse the child was concerned, the obstetrician had observation for only a short period. Bottle-fed babies were unknown in hospital work. In private cases, the higher they went in the scale of intelligence, the less did they find indisposition to nurse the baby. Women had begun to return to their mother's view-point. Breast milk should be utilised as long as possible. No one seemed to have laid sufficient stress upon combined feeding. The mother should be taught that when her milk began to fail, she should seek instruction in the combination of breast and artificial feeding. In inverted

nipples little could be done in the way of ointments or breast-pumps. The baby was the best means of drawing them out; sometimes the shield called the "infantibus" was successful. This acted like an old-fashioned sucker in that the baby took hold of the nipple and thus produced a vacuum. In the preparation of the nipples for nursing all that was needed was to keep them clean. Astringent preparations and ointments were of little service. During nursing, the more done to the nipples, the worse they got. They would heal, if in bad condition, by applying the lead nipples described by Dr. Hirst. Dr. Norris had abandoned massage of the puerperal breast and now used hot compresses. The only laxative he used besides salines was cascara. For small fissures of the breast, easily recognised by applying a water and alcohol compress, he used bismuth and castor oil. While encouraging women to nurse their babies, the moment the child began to be restless, lost weight and cried, he gave artificial food in addition to the breast. He believed that, if artificial feeding of the infant were raised to a higher plane of scientific accuracy and the knowledge of the specialists became the knowledge of the general profession, there would be less infantile mortality.

Dr. G. M. BOYD said that the obstetrician saw the baby for two weeks to a month, when it was referred to the family physician. The obstetrician should do all in his power to persuade the mother to nurse her child. This work began during pregnancy, in painstaking care. The jacket bandage prevented engorged breasts. The pressure of the bandage was increased if the supply was greater than the demand and the patient was purged and starved. Massage should seldom be resorted to, the rule being "hands off." The mother needed sufficient rest after delivery. Dr. Boyd was glad to hear Dr. Hirst speak of the possibility of re-establishing lactation after weeks of cessation. They were often too ready to place the infant upon artificial food.

Dr. T. S. WESTCOTT spoke a word of defence for American women of the better class. Very few women were not anxious to nurse their children. But it was appalling how frequently a satisfactory breast supply was ruthlessly sacrificed on the advice of someone, often a trained nurse. Dr. Griffith had wisely emphasised the point that they should not hasten to give up breast-feeding for minor reasons. The weight chart should be kept weekly and carefully studied by the physician. A gain of from 8 to 12 oz. could be secured weekly under favourable circumstances. When a baby only gained 2 or 3 oz. a week after a trial of four or five weeks, the mother's feeding should be supplemented by, first, one bottle, and the number should be gradually increased until weaning was accomplished. It might take a month or two before the last drop of milk was given up. The mother's secretion would not be affected by one or two bottles daily, but giving three or four bottles diminished the output rapidly. In some cases the bottle should follow each feeding. The infant whose digestive power agreed best with the formula of the mother's milk was the one that made the best out of it. It was important to avoid over-feeding the infant. Dr. Westcott advised whey in addition to the low proteid of ordinary milk mixtures.

Dr. E. E. GRAHAM said that the artificially fed babies showed the highest mortality. This was especially true among the poor, who should be educated in the bottle-feeding of infants. He allowed the baby one bottle a day, from the earliest period of infancy. The ability of women to begin re-nursing babies was most important. Babies weaned from two to six weeks earlier could often be brought back to the mother's breast.

Dr. ELEANOR S. JONES laid stress upon putting the baby to the mother's breasts early, not waiting until twelve or even twenty-four hours after delivery.

Mothers needed plenty of fluids. Practically all the sick babies were bottle-fed. It was not a question of teaching the poor how to feed the baby artificially. Physicians should impress on other physicians and mothers the necessity for urging mothers to keep babies on the breast. Until this sentiment was created, the average physician was quite ready, with the first intimation that the baby was not doing well, to suggest the bottle. In many cases, if the baby was kept on the breast, even though not gaining, and artificial food begun later, it did better than if taken off the breast early. The nurse was only the reflex of the physician; when the physicians universally declared the importance of the mother nursing her baby, the nurse would follow suit.

Dr. MAURICE OSTHEIMER said that the Children's Aid Society of Pennsylvania had established a Directory and Bureau of Registration for wet nurses, and at present had eight or more babies in homes of wet nurses. They hoped in the future to be able to have a sufficient number of wet nurses to supply requests for them. The Society's physician made Wassermann and tuberculin tests upon the mothers and the infants, thus carrying on the work in a scientific manner.

Dr. GRIFFITH added that the work of the Children's Aid Society arose from the difficulty in having some of the children satisfactorily fed in the University Hospital. They desired to find homes where women would nurse babies from the hospital besides their own babies. Nurses and physicians would supervise this work, to see that each baby was properly fed and cared for. After they had created a sentiment among the people for this, the project would succeed, as New York already had a satisfactory directory for wet nurses. The Children's Aid Society deserved all possible help in this matter.

Dr. FUSSELL stated that the trained nurse was not responsible for the prevalence of bottle-feeding, but rather meddling neighbours and friends. After a baby had once tasted bottle-milk it was hard to continue nursing. For that reason alone he puts off supplemental feeding as long as possible. The question of the wet nurse was an extremely important one and should be left in the hands of the Children's Aid Society of Pennsylvania.

A motion, made by Dr. HIRST and amended by Dr. CARPENTER, was then carried: "That a joint Committee, formed of members of both the Philadelphia Obstetrical Society and the Philadelphia Pediatric Society, be appointed to confer with the Children's Aid Society, to endorse their work in securing competent wet nurses, and to aid them in preparing a Directory and Bureau of Registration for wet nurses."

Société de Pédiatrie, Paris.

February the 13th, 1912. (Bulletin No. 2.)

Early Treatment of Scoliosis.—Mme. NAGEOTTE-WILBOUCHEWITCH showed a girl, aged 12 years, who had been under treatment since the age of six. Her health had been good up to the age of five years. After attacks of measles and scarlatina she developed a right dorsal scoliosis. The treatment consisted (1) in rendering the spinal column movable by rational exercises; (2) in developing the thoracic muscles; (3) in maintaining a correct

position at the age of seven years by means of an orthopædic corset. The correction was at present perfect. Later on attempts would be made by wearing another kind of corset without bones and by stopping the exercises to obtain a relative ankylosis in a good position.

Giant Papulo-tubercular Bromide Rash.—MM. HALLÉ and DORLINCOURT showed a girl, aged 7 years, on whose face were large papules having a crop of acuminate points in the centre containing pus without micro-organisms, formed by altered leucocytes. This condition, which might be confused with trichophyton or tubercle, was rare and difficult to diagnose. It followed the administration of bromides.

M. COMBY had seen tuberculoid warty lesions caused by the administration of bromides.

Laryngo-spasm following Intra-nasal Instillation of Resorcin Oil in a Boy, aged 4 months.—M. RAILLET related the case of a feeble infant in whom the instillation of a few drops of solution of resorcin in olive oil (0.25 in 10 c.c.) was followed by cyanosis and asphyxia. The symptoms were recovered from after artificial respiration.

Acute Peritonitis, probably Appendicular, in an Infant five days old.—MM. CANAGNIER and HAMEL read notes of the case of an infant who on the second day after birth had passed no meconium and had regurgitations of yellowish-green matter. An enema brought away a large quantity of meconium. On the fifth day there were signs of intestinal obstruction, with great abdominal distension. At the operation a long, twisted and inflamed appendix was found. The infant did well for three days, but the abdominal distension caused separation of the stitches with extrusion of the intestines and death took place.

Syndrome in an Infant apparently connected with Hypertrophied Thymus.—MM. GUINON and F. MONTIER related the case of a boy who from the age of six to thirteen months presented two sets of symptoms; one seemed due to hypertrophy of the thymus as observed by radioscopy, and consisted in polypnoea with tachycardia; the other was toxic, characterised by anæmia, anorexia, diarrhoea, urticaria, etc., possibly caused by anaphylaxis to albumin.

Paralysis of the Two External Recti of Diphtheritic Origin.—M. TERRIEN reported a rare case of this kind. There was no paralysis of accommodation. Slight paralysis of the palate. This condition disappeared in a few days under serum treatment.

Five Cases of Foreign Bodies in the Trachea and Bronchi.—M. GUSEZ extracted with the help of bronchoscopy from an infant of six months two clasps which had become lodged in the right and left bronchus; in other cases a plum-stone, and a piece of meat. In two cases of very young infants, below two years of age, superior bronchoscopy was impracticable.

Costal Osteomyelitis; Death from Septicæmia.—MM. SAVARIAUD and PONT report the case of a girl, aged 10½ years, admitted for a purulent pleurisy. There were costal osteomyelitis and abscesses in the liver and kidneys.

Two Cases of Supernumerary Thumbs.—MM. SAVARIAUD and PONT.—The lobster-claw arrangement was the same in both, the principal thumb being slightly deviated towards the index, a deviation which the operation tended to accentuate. The supernumerary thumb articulated in the first case with the head of the metacarpal, while in the second it articulated with the first phalanx of the thumb. In spite of this anatomical difference the result was identical in both cases; the deviation was more apparent and had to be corrected by apparatus.

Dried Milk in Infant Feeding.—MM. AVIRAGNET, BLOCH MICHEL and H. DORLENCOURT issue a report on this subject founded on investigations pursued for two years at the Hôpital des Enfants Malades. Several market brands were used. In normal children it was found as efficacious in mixed feeding as either boiled or sterilised milk. Dyspeptic infants fell into four groups: (1) Digestive disorders and arrest of development in infants brought up on the breast and subjected to mixed feeding. (2) Gastro-intestinal disturbance with implication of the general health and more or less marked tendency to atrophy. (3) Digestive trouble, chiefly gastric. (4) Acute gastro-enteric conditions.

In most cases the milk powder gave excellent results, but in others it seemed to cause a little diarrhoea, which, however, passed off in the course of a few days without changing the *régime*. In some cases of syphilitic or tuberculous taint it failed to cause an increase of weight.

VINCENT DICKINSON.

Abstracts from Current Literature.

Medicine.

The value of percussion of the skull in children ('*Riv. di clin. Pediat.*' 1912, x, p. 32).—G. FIORE.—In a normal child from four to five years old six different zones may be distinguished, three above and three below a line drawn from the occipital protuberance to the frontal eminence, passing across the parietal eminence. The three upper and lower zones are marked out by two lines rising respectively from the posterior margin of the mastoid process and from about a centimetre behind the external angle of the orbit. The highest pitch is obtained in the upper medium zone, while the anterior and posterior give a lower pitch with a greater degree of resonance. The lower posterior zone gives a dull sound, sharp but hardly resonant; the middle a dull tympanitic sound, quite dull in its lowest part; the anterior a dull sound, slightly resonant. In older children above the age of six or seven years, owing to the presence of the frontal sinuses the resonance of this region may be a little more marked. Over the mastoid process there may be a marked tympanitic resonance. The left half of the skull gives a note slightly more resonant than the right. Within these limits of age the modifications of the cranial sound vary with different individuals, but in normal cases a definite tympanitic note of high pitch with a more or less metallic timbre is never present. In young infants whose bones are still soft the skull is little resonant, the note is dull, sharp and muffled, but in those a little older a higher pitched and more resonant note is generally obtained. The thinness

of the bones, the presence of the fontanelles and ununited sutures contribute to this result. The resonance is, in fact, greater in the neighbourhood of the sutures and becomes less as the fontanelles close. But there is another factor which contributes in giving a clearer note in young infants—the larger amount of cerebro-spinal fluid and the intra-cranial pressure, which is rather in excess of that which exists at a more advanced age. Contrary to the opinions of D'Astros and Pfaundler, Mya has clearly shown that in early life the cerebro-spinal fluid is physiologically more abundant and escapes in a continuous stream, which indicates that there is greater pressure. Recently Francioni has confirmed this ('*Riv. di clin. Pediat.*,' 1911, ix, p. 161). Hence the cranial percussion sound in children has a more tympanitic tone in the first two years of life and gradually diminishes. The difference between the various zones is less marked, or confused by the presence of fontanelles. The author gives his results obtained by percussion over the skull in cases of rickets, mongolism, achondroplasia, etc., for the details of which the paper must be consulted. He considers these results to be clear and important. By percussion a peculiar tympanitic resonance is elicited, which may assume various metallic tones up to the so-called cracked-pot sound; it may be diffused or localised. Such tympanitic resonance is in direct relation with the intra-cranial pressure and indicates its oscillations, but it may be also due to thinness of the bones of the vault of the skull and to widening of the sutures. Constant and marked in tuberculous meningitis in its earliest stages, often present, although in less degree, in purulent meningitis, feeble, though present, in encephalitis, absent in some forms of meningismus, it may furnish useful data for the differential diagnosis between these various affections, and between them and the vague nervous symptoms which in childhood so often complicate various infections and intoxications. Varying in direct relationship with changes in the amount of cerebro-spinal fluid, in chronic hydrocephalus and in meningococcal meningitis, and generally in every case of intra-cranial hypertension, it may serve as a useful guide to the indications for lumbar puncture. In certain cases of tumour it may furnish important data for diagnosis and for localisation.

VINCENT DICKINSON.

Multiple malformations of the cerebro-spinal axis ('*Gaz. d. Hôp.*,' 1912, LXXXV, p. 111).—L. Rayan and C. Mattei describe a case of a female child, aged 10 days, presenting a median frontal encephalocele about the size of an orange, divergent strabismus, and an inconstant rotatory nystagmus. In addition there were noted all over the cranial vault depressions analogous to fontanelles, a dorsal spina bifida, the size of a pear, which was partly ulcerated, and atrophy of the sacrococcygeal vertebræ associated with a cervico-dorsal scoliosis with the convexity to the right. There was a flaccid paralysis of both lower limbs, most marked on the left. Sensation was abolished on the left, retained on the right. Talipes equinus existed on the right side. The Wassermann reaction was negative. The infant died on the twentieth day after birth with signs of meningitis and bronchial obstruction. At the autopsy the cranial vault was found to consist of a network of osseous trabeculæ, with the meshes occupied by membrane about $\frac{1}{3}$ mm. thick; no fontanelles or sutures could be made out. The trabeculæ penetrated deeply into the brain substance, accentuating the normal and creating new fissures. On section the brain was occupied by an abscess cavity, the size of a mandarin orange, formed at the expense of the three cerebral ventricles. The cerebral substance was much atrophied. The authors

attribute the condition to arrest of development dating from the second month of foetal life, and regard the only possible cause a tubercular family history.

CHRISTOPHER ROLLESTON.

Congenital axial extra-cortical aphasia (a new disease of the nervous system) (*'Semana med.'* 1911, xviii, p. 565).—**Merzbacher** gave the following description to the Argentine Medical Society of a disease which he regards as *sui generis*. The disease has been known twenty-five years. In 1906 a colleague sent him a brain for examination from an idiot who had passed his life in bed and who died of tuberculosis. His upper extremities had been fractured and had been amputated with a pair of scissors, so soft were they. The thorax and pelvis were deformed. He was one metre in height. The head was in continuous movement; the lower legs paralysed; speech difficult to understand. The mother said that out of six sons four were attacked in exactly the same way at their fourth month. Father and mother normal. Pelliseo had described, twenty-five years ago, a family disease which he regarded as disseminated sclerosis. It transpired that this was the same case that Merzbacher now related. The disease had continued in the family for twenty-five years. In 1885, five were affected, in 1906, twelve, and in 1911, fourteen. Although the case had been often described clinically it was the first time that its pathological anatomy could be investigated. Its transmission is interesting. The healthy mother transmits the disease, which has now been handed on to the fifth generation. It passes over two generations to reappear in the third, but of fourteen now attacked only two were females. The youngest was one year old, the oldest fifty-two years. *Premonitory symptoms* at about three months consist in nystagmus and trembling of the head. Babinski present, knee-jerks diminished, ataxia of voluntary movements. The first or spastic period is followed by paresis and contractions of the legs, feet abducted. Then paresis and contractions of the arms and neck. Examination of the brain showed that it was well formed, convolutions well developed. Atrophy of the whole commissures, narrowing of the corpus callosum and atrophy of the whole substance; grey matter normal. There appear to be sclerosed plaques but the lesions vary. In the internal capsule and peduncles there is an absence of axis cylinders.

M. D. EDER.

Hereditary spastic paraplegia (*'La Semana Medica,'* 1911, xviii, p. 1001).—**Fernando Schweizer** demonstrated to the Argentine Medical Society a Jewish family where all the sons were afflicted with the disease. The youngest, aged 8 months, presented rigidity of the legs and increase of the reflexes. In the older boys there were abduction and increase of reflexes. They were all born at full term and were nursed by the mother; there had been no miscarriages and no specific history. It would seem that the children improved as they grew up; in the elder ones the trouble was less marked than in the younger ones.

M. D. EDER.

Pseudo=bulbar glosso-labial paralysis in a boy, aged 12 years (*'L'Echo méd. du Nord,'* 1911, xv, p. 106).—**Deléarde** relates a case of this rare condition in a child born of healthy parents, with no history of syphilis. When six months old the infant had convulsive seizures accompanied by difficulty in suckling; after these it was fed by a spoon. Up to the age of four years there were about two convulsions a week, limited to the left side, and especially to the upper limb. There was an aura but no loss of con-

sciousness, biting of the tongue, or involuntary micturition, but drowsiness followed the fits. The face of the child was characteristic, the mouth open and dribbling saliva, the naso-labial folds obliterated, the palate motionless. Swallowing was difficult, solids having often to be pushed to the back of the mouth with the finger. The pharyngeal reflex was weakened, but sensation was preserved. The tongue was not atrophied and there was no tremor, but the movements were very feeble and it could not be protruded. The larynx produced a guttural sound, always the same, but intelligence was expressed by the gestures. The pupils were normal and there were no ocular paralyses; the hearing was normal. The muscular strength was good, but slightly diminished on the left side, where there was slight atrophy. The reflexes and gait were normal. There appeared to be a double cerebral lesion, probably in the Rolandic area at the lower part of the ascending frontal, and some irritation of the right motor zone.

J. PORTER PARKINSON.

Subarachnoid hæmorrhage in a child (*Progrès. méd.*, 1912, XL, p. 46).—M. Griolet publishes the case of a girl, aged 12½ years, child of a father the subject of laryngeal tuberculosis, who was seized after exposure to rain with violent pain in the head, diarrhœa, nausea and twitchings. Complete coma ensued with stertorous breathing, jactitation, dilatation of pupils on both sides. Knee-jerk exaggerated on right side, almost none on left. Kernig's and contra-lateral signs. Contraction of back. Hardly any appreciable nuchal contraction. Three leeches ordered to the right mastoid, sinapisms to feet, and enema of chloral. The coma disappeared and the patient complained of drowsiness and severe pain in the right temple. Lumbar puncture withdrew a liquid, which flowed rapidly and under tension and was distinctly hæmorrhagic. Lymphocytes 94 per cent., polynuclears 5 per cent., eosinophiles 1 per cent., no meningococci. Cuti-reaction negative. Recovery in about three months. With the family history and lymphocytosis of the cerebro-spinal fluid the case seemed at first one of tuberculous meningitis. The subsequent course, however, was against it, and a sudden onset is very rare except in young infants. In this case most of the signs of subarachnoid hæmorrhage were present, an apoplectiform condition indicative of a sudden invasion, coma, which is always of short duration in purely meningeal hæmorrhage, contractures and blood in the cerebro-spinal fluid. Fever was noticed after the onset, attaining its maximum at the time when an improvement took place in the general condition. This "hæmolytic fever," or fever of absorption, is of favourable import. The ætiology of the case was obscure. Recovery was complete except for a slight paresis which was rapidly disappearing.

VINCENT DICKINSON.

Influenzal cerebro-spinal meningitis (*Arch. of Ped.*, 1911, XXVIII, p. 210).—J. R. Clemens and C. W. Gould report a fatal case in a male infant, aged 7 months, in which the diagnosis was made during life by lumbar puncture. The signs of meningitis were well marked, and there was evidence of consolidation at the left apex. About six drachms of purulent cerebro-spinal fluid were withdrawn, smears and cultures of which yielded influenza bacilli. No necropsy.

J. D. ROLLESTON.

Cerebro-spinal meningitis due to influenza bacillus (*Arch. Int. Med.*, 1911, VIII, p. 133).—L. J. Rhea records two cases. The first was a male child, aged 6 months, who died with cerebral symptoms on the fourth day of disease. Large and small intra-pial ecchymoses and hæmorrhagic

areas were irregularly distributed over the brain; microscopical areas of encephalitis not visible to the naked eye were also found. *B. influenzae* was obtained in pure culture from the meninges. The second case was a girl, aged 5 years, who died of internal hydrocephalus eighty-nine days after the onset of the disease. Left hemiplegia on the forty-fourth day. During life *B. influenzae* was obtained from the blood and cerebro-spinal fluid. The meningitis in this case was apparently secondary to involvement of the upper air-passages. J. D. ROLLESTON.

Suppurative cerebro-spinal meningitis due to Pfeiffer's bacillus (*'Thèses de Paris,'* 1911-12, No. 40).—**R. Blaque.**—This thesis contains the histories of fifty cases, including seven original ones. The conclusions are as follows: Meningitis due to Pfeiffer's bacillus is a suppurative cerebro-spinal meningitis of acute or subacute course. It is fairly frequent in children, especially in infants. Its prognosis at this age is very grave. It is sometimes clinically primary, but it is usually preceded by pleuro-pulmonary symptoms, osteo-arthritis, abscesses, or suppurative otitis. The frequency of these associations is characteristic, and helps to distinguish the disease from meningococcic meningitis. Infection of the meninges may occur through the lymph-channels, following otitis or rhinitis. In a large number of cases it takes place by the blood. This form of meningitis may sometimes occur in epidemic foci, but these do not appear to coincide with epidemics of influenza. There is, therefore, no justification for calling the condition influenzal meningitis. J. D. ROLLESTON.

Recovery from symptoms of tuberculous meningitis in children (*'Bull. et mém. Soc. Méd. Hôp. de Paris,'* 1911, xxxii, p. 440, and *'Arch. de méd. des enf.,'* 1912, xv, p. 241).—**H. Barbier** and **J. Gougelet.**—Among the recorded cases of recovery from tuberculous meningitis must be classified: (1) some fifteen to twenty cases which rest on clinical findings alone; (2) eight cases which presented a remission of varying duration, but which finally died and in which the diagnosis was confirmed by the necropsy; (3) four cases in which tubercles of the choroid were associated with meningeal symptoms; (4) twenty-four undoubted cases in which the diagnosis was confirmed by the results of lumbar puncture and experiment. The authors record three cases of pulmonary or pleuro-peritoneal tuberculosis in which transitory meningeal symptoms accompanied by cerebro-spinal lymphocytosis ended in recovery. The lesions in such cases are either those of a sero-fibrinous meningitis with slight effusion or of a very discrete and localised meningitis with granulations. In some cases herpes zoster may be the sign of a tuberculous meningo-radicitis without any other meningeal symptom. The curable cases of meningitis may leave certain sequelæ: (1) Immediate, viz. palsies of the eyes, limbs and face, disturbance of the reflexes and speech, aphasia, blindness or inequality of pupils; (2) remote, viz. headaches occurring on the slightest exertion, arrest of mental development and loss of memory. Possibly such cases are related to certain forms of juvenile general paralysis and dementia præcox. The prevention of such complications in children who have recovered from tuberculous meningitis can be realised by the general treatment for tuberculosis and the avoidance of physical and mental overwork. **J. Gougelet** (*'Thèses de Paris,'* 1911-12, No. 30), in a thesis on this subject inspired by Barbier, records twenty-five illustrative cases. J. D. ROLLESTON.

Case of cured cerebral tubercle (*Riv. di clin. Pediat.*, 1911, ix, p. 883).—**G. Fiore** reports the case of a tuberculous girl, aged 5 years, who had recovered for seventeen months from a clinical point of view from convulsive seizures of Jacksonian type due to a tubercular affection of the left Rolandic region. At a subsequent autopsy a healed lesion was found in this locality, the details of which, anatomic and microscopic, are described fully.

VINCENT DICKINSON.

Tuberculous meningitis in a suckling (*Zentralb. f. Kinderheilk.*, 1911, xvi, p. 407).—**L. Schaps** describes a case which proved on post-mortem examination to be one of the above disease, occurring in a child, aged 6 months. During life there had been no fever nor irregularity of the pulse, and motor disturbances were almost entirely absent. Stiffness of the neck was never present, nor hyperæsthesia of the skin. The sensory apparatus was very slightly affected. Lumbar puncture failed to assist the diagnosis as no fluid could be withdrawn.

F. R. B. ATKINSON.

Dermatology and Syphilis.

Dermatitis bullosa with successive exacerbation (*Arch. de méd. des enf.*, 1911, xiv, p. 847).—**J. Comby** relates the case of a girl, aged $9\frac{1}{2}$ years, suffering from a bullous eruption with erythema, the successive outbreaks of bullæ being accompanied by pain and fever at the commencement for about a month, followed by apyræxia, with disappearance of the bullæ and cure. He believes that ointments and moist applications are contra-indicated and advises dry powder. In this case the patient's body was covered with talc powder, and she may be said to have lived in a sack of flour.

F. R. B. ATKINSON.

Livedo annularis in a child (*Arch. de méd. des enf.*, 1912, xv, p. 119).—**Jourdanet** describes this condition in a child, aged 4 years, and discusses the disease generally. This name is given to the blue marks on the skin formed by a mixture of parts coloured violet-red, and others where the skin is normal. It is due to dilatation of the cutaneous capillaries. Lymphatism and scrofula have been regarded as causes, and blueness of the extremities and chilblains are frequently met with. Bonnet (*Presse méd.*, 1909, xvii, p. 338) distinguishes a transitory form, often occurring with mild tuberculous lesions, particularly adenopathy, and a durable form, of which a special type has received the name of érythémato-inflammatoire (Balzer et Griffon, *Ann. de Derm. et de Syph.*, 1897-1898). It attacks most often the knees. The redness disappears on pressure; the epidermis is sometimes scurfy. Unna mentions some rare forms of livedo associated with ulceration. The disease can be confounded with measles, with ecchymoses, scabies (itching, localisation differentiate it), and pityriasis rosea. In this latter, squamous itching plaques on the chest, and progressing downwards, reveal the condition. It also much resembles purpura, but an examination of the thighs and legs, in which livedo is especially marked, and also the whole body, will remove any doubt. Treatment consists in stimulation of the peripheral circulation, cutaneous friction, salt baths, cod-liver oil and glycerophosphates. Thyroid has done good in some cases, and adrenalin might be of value.

F. R. B. ATKINSON.

Vitiligo and chorea (*Monatsschr. f. Kinderheilk.*, 1912, x, p. 572).—**K. Mallinckrodt** reports the case of a girl, aged 10 years, in whom idiopathic vitiligo occurred with chorea. The exciting cause seems to have been repeated mental shock. The association of this disease with chorea has only been described twice in the literature—by Escherich and Möbius (*Schmidt's Jahrb.*, 1886, ccix, p. 251).
F. R. B. ATKINSON.

Calcareous skin and subcutaneous tumours (*Journ. de méd. de Bordeaux*, 1912, XLII, p. 151).—**Carles**.—The boy, now aged 6 years, began to walk at thirteen months, but when three years old there was some stiffness of the knees and hips without any apparent cause; this increased, and at the age of five years hard nodules appeared scattered throughout the body. There were pain and limitation of the lateral movements of the neck, and of all the joints of the arms and legs; the vertebral column was rigid. Numbers of small cutaneous and subcutaneous tumours were to be felt in the skin and the subcutaneous tissue, and with the X-rays there was seen a calcareous infiltration of the aponeuroses and tendons. Walking was painful and almost impossible on account of the rigidity of the legs. The tumours showed the structure of fibromata with calcareous degeneration following on a collagenous necrosis. No cause of the condition could be found.

J. PORTER PARKINSON.

Pneumo-hypoderma (emphysema cutis) (*Med. Rec.*, 1911, II, p. 1062).—**Herman B. Sheffield** describes a case of this condition. It resulted from rupture of pulmonary alveoli and escape of air into the subcutaneous tissues, and was produced by violent coughing due to bronchopneumonia complicating measles. The patient was a little girl, aged 3½ years. The child's features were entirely effaced and her Kalmuck-shaped, congested eyes were deeply sunken between the swollen lids. The trunk and upper extremities were also affected. The child recovered within four weeks.

FREDERICK LANGMEAD.

Telangiectases in children in association with wasting and protracted diarrhœa (*Brit. Journ. Derm.*, 1912, XXIV, p. 35).—**E. Greaves Fearnside**s records six cases in children, aged from one to ten years, who showed three types of rashes: (1) Erythema; (2) telangiectases; (3) purpura. These rashes were associated with œdema, wasting and diarrhœa. The writer concludes that (1) the various rashes were the expression of vascular dilatation, the most characteristic being telangiectases. (2) The rashes were the direct result of wasting, which owed its origin to protracted diarrhœa (see BRITISH JOURNAL OF CHILDREN'S DISEASES, 1912, IX, p. 1).

J. D. ROLLESTON.

Recklinghausen's disease in children (*Prag. med. Woch.*, 1911, XXXVI, p. 375).—**Hirsch** gives the following description of three cases: (1) At the age of ten days, dark brown pigmented nævi rather less than the size of a farthing (*kreuzer*) were seen in the left inguinal region, on the sacrum and the right thigh. Ten weeks later nævi were found on the left side of the abdomen, over left trochanter, right forearm and right scapula. Later on similar pigmentation was noticed on the right knee. No tumours were seen during the child's stay in hospital. (2) A brother, at the age of three weeks, developed pigmented nævi on the right knee, the left side of the back, and the right shoulder-blade; later on two nævi appeared on the left

chest. The mother's body was beset by nævi and by fibromata, some sessile, others pedunculated. (3) A well-developed girl, aged 6 years, had a tumour between the ninth dorsal and third lumbar vertebrae, not placed symmetrically on both sides of the spine. The tumour was painful when touched. It was first noticed in the second year, and had recently grown rapidly. On the right forearm there was a telangiectatic nævus. Neither the parents nor the other children had anything of this nature. Hirsch regards the first two cases as "abortive cases" of neuro-fibromatosis (Jadassohn), and considers it probable that later on both the boys will develop fibroma molluscum.

M. D. EDER.

Familial von Recklinghausen's disease ('*Rev. Neurol. and Psych.*, 1912, x, p. 1).—J. D. Rolleston and N. S. MacNaughtan record a family in which the disease existed in three generations. Of the four children of the third generation the eldest daughter, aged 13 years, showed a general yellowish tinge of skin, punctiform pigment-spots, *café-au-lait* patches, numerous slightly raised molluscous tumours, and a nævoid growth on the upper lip, which, on removal, was found to be a plexiform neuroma. The youngest daughter, aged 5 years, had a general yellowish tinge of skin and numerous pigment-spots, but no molluscum. After an attack of diphtheria the molluscum of the elder girl and the pigment-spots of her sister increased in number and size. The other two children, a boy aged 14 years, and a boy aged 10 years, both showed a slight yellowish tinge of skin, but no molluscum nor pigmentation when first seen. Four months later, however, after an attack of diphtheria, the younger boy developed some pigment patches on the trunk. A *résumé* of the twenty-two cases of familial and hereditary von Recklinghausen's disease published since 1900 is appended.

J. D. ROLLESTON.

Multiple areas of pigmentation of eight years' duration ('*Journ. Cut. Dis.*, 1912, xxx, p. 83).—F. Crozer Knowles records a case in a girl, aged 12 years, who at the age of four years developed multiple pigmented spots of the covered portions of the body to the almost entire exclusion of the exposed parts. There was no tumour formation. Biopsy showed an increase of pigment-cells, otherwise the skin was absolutely normal. The author regarded the condition as an ephelis, although the pigmentary stage of von Recklinghausen's diseases could not be absolutely excluded. A congenital defect was also a possible explanation. Marked improvement followed application of solid carbon dioxide to some of the lesions, and of trichloroacetic acid to others. A review of the literature is given.

J. D. ROLLESTON.

Sclerodermia in children ('*Thèses de Paris*, 1911-12, No. 213).—A. Alfès.—Sclerodermia in children presents the same clinical appearances as in adult life, but the generalised form is very rare. Localised sclerodermia, in patches or in bands, is the form most commonly met with in childhood. This probably accounts for the disease being much less serious in children than in adults. Of Loewin and Heller's thirty-nine cases in children under fifteen years of age, twelve completely recovered, eleven showed more or less improvement, twelve no improvement, and four died. As in adults, the female sex is predisposed. The ætiology and pathogeny are obscure, and treatment can be only symptomatic. The thesis contains the histories of twenty-six cases, one of which is original, in children aged from one month

to sixteen years. Alfès' case was a girl, aged 7 years, with bands of sclerodermia on the antero-external surfaces of the upper and lower limbs.

J. D. ROLLESTON.

Sclerodermia with facial hemiatrophy (*Arch. f. Derm. und Syph.*, 1911, cvi, p. 3).—**A. Afzelius** records a case in a girl in whom sclerodermia, affecting the left side only, occurred after a severe attack of influenza at the age of five years. Four years later the sclerodermia had almost entirely disappeared, but left facial hemiatrophy had developed, affecting the skin and subcutaneous tissue only. This condition was still present though somewhat less marked when the patient was twenty years old. The association of sclerodermia with facial hemiatrophy suggests the same pathogeny, *e. g.* a trophoneurosis concerned with the fifth nerve or the sympathetic. The trophoneurosis may have been caused by an infective agent, as the patient had recently had an attack of influenza. Other cases of sclerodermia have been recorded after typhoid fever or diphtheria.

J. D. ROLLESTON.

Severe case of Raynaud's disease (*La Clin. inf.*, 1912, x, p. 33).—**MM. Variot and Morancé** showed at the Société de Pédiatrie a boy, aged 3 years, with gangrene of the nose, ears, hands and feet. He was a deaf-mute, but intelligent. The case was interesting for the following reasons: (1) The age of the patient, the disease being more common after the age of twenty years, cases at an early age being rare. (2) The absence of asphyxia and local syncope, which usually precede the symmetrical gangrene. (3) The absence of any apparent cause: no morbus cordis or exposure to cold. Hereditary syphilis was not probable although the child was a deaf-mute; there was no reason to suspect ergotism. (4) The remarkable extent of the lesions, especially in the upper limbs. The lesions are usually limited to the terminal phalanges; involvement of the nose and ears is very rare. Raynaud declared he had never seen them. The only case recorded is that of Bernard Henry in an adult in whom the lesions presented a topographic analogy with the present case. One of the authors, who had been the last assistant of Raynaud, saw at the Charité in 1881 several adults attacked with asphyxia of the extremities, but nothing even remotely resembling the extensive symmetrical gangrene observed in this child.

VINCENT DICKINSON.

The treatment of ringworm of the scalp (*Glasgow Med. Journ.*, 1912, i, p. 118).—**J. R. Riddell** deprecates the use of X rays as a routine method in the treatment of this disease. The method is effective, but in a certain number of cases (probably about 2 per cent.) there is danger of permanent alopecia resulting. The author favours the ionic method of applying antiseptics, and he considers that it is certain, rapid and safe. By this means the drug can be carried right into the hair-roots, and thus destroy the vitality of the spores *in situ*. The technique employed is as follows: The child's head is shaved or the hair is cut short all over. A solution of the drug to be used is rubbed well into the affected parts. Folds of lint (ten to sixteen-ply) are soaked in the solution and applied evenly to the surface; over this the electrode is placed and secured by a few turns of bandage. It is important that the lint should overlap the diseased area, and that it should be thoroughly moistened. The electrode may be made of any convenient metal. The author generally uses copper gauze, as it is pliable and adapts itself easily to the surface. It should be large enough to cover the diseased area. One pole of the supply is attached to the electrode which is

on the head; the other is connected to a water bath in which the child's arm or foot is immersed, or to a large, well-moistened pad, which may be bound to the arm or leg. The current is now slowly turned on and increased gradually, the aim being to increase it as much as possible short of actual discomfort. When the area under treatment is large the child usually allows 15 to 20 ma. to be used. Each sitting should be as prolonged as possible, generally from forty to fifty minutes. The solution used is either a 1 per cent. solution of mercuric chloride or a 2 per cent. watery solution of iodine. The treatment should be repeated two or three times a week. It is well to have the head washed daily or every other day with an antiseptic, such as the sulphur, β -naphthol, and green soap mixture commonly prescribed. If the treatment makes the scalp scaly or irritable, a mild antiseptic oil may be used between the sittings, but it must be thoroughly removed before making ionic medications.

J. ALLAN.

Serum diagnosis in infantile heredo-syphilis and family syphilis (*Arch. de méd. des enf.*, 1911, xiv, p. 881).—**Leroux** and **Labbé** report their investigations on this subject carried on at the Furtado-Heine Dispensary, Paris. They obtained a positive reaction in nearly all cases of early heredo-syphilis with active symptoms, in 85 per cent. of late heredo-syphilis, in 11 per cent. of latent cases; in heredo-parasyphilis (dystrophies and degenerations) and in healthy children born of syphilitic parents the reaction was always negative. The mothers of syphilitic children gave a positive reaction in 71 per cent. of cases, whether they had symptoms of syphilis or not. The fathers of syphilitic children gave it in 42 per cent. The authors conclude—(1) that maternal syphilis is more often conceptional than derived by direct infection from the father. (2) That the mother is infected in the great majority of cases; hence the rarity of purely paternal transmission. (3) That active maternal syphilis with a positive reaction generally gives rise to virulent infantile syphilis, sometimes to latent syphilis with positive reaction, more rarely to infantile syphilis with negative reaction, occasionally to healthy children. (4) That latent maternal syphilis with negative reaction nearly always gives rise to parasyphilis or to healthy children, occasionally to syphilitic children with positive reaction, with or without symptoms. (5) That paternal syphilis (the mother being healthy with positive reaction) only gives rise to parasyphilis with negative reaction or to healthy children. (6) That if the father and child give a positive reaction, so does the mother always. (7) That treatment has no constant effect on the reaction, and the latter gives no certain therapeutic indications. Serum diagnosis gives no precise information as to cure or immunity.

C. F. MARSHALL.

Wassermann's reaction in congenital syphilis (*Arch. f. Derm. und Syph.*, 1912, cxi, p. 91).—**W. Thomsen** and **H. Boas** investigated a large number of cases, and came to the following conclusions: (1) The children of syphilitic mothers are much more frequently born healthy and remain so when Wassermann's reaction in the mother's blood is negative than when it is positive. A negative reaction, however, in the mother is only of prognostic significance when she has not recently been under treatment. (2) Children who show signs of congenital syphilis after birth have not always a positive reaction at birth, but invariably give a positive reaction when the disease shows itself or shortly before. (3) In isolated cases children may give a positive reaction at birth without showing signs of syphilis later. Presumably in such cases there is a transmission of reacting substances

from the mother to the foetus. (4) Syphilitic changes in the umbilical cord and placenta may sometimes occur in children who prove to be syphilitic later, although their blood gave no reaction at birth. The examination of the blood in the newborn should therefore be combined with an examination of the placenta and umbilical cord. (5) The presence or absence of a positive reaction in latent congenital syphilis probably depends on the period of pregnancy at which the foetus was infected. (6) Children and older persons with various manifestations of congenital syphilis always give a positive reaction. (7) The amount of reacting substances in congenital syphilis, and their resistance to mercury, etc., are considerably greater than in the acquired disease. (8) The mothers of syphilitic children are themselves syphilitic.

J. D. ROLLESTON.

Latent syphilis in mother and child with positive Wassermann's reaction ('*Hospitalstidende*, 1912, LV, p. 74).—L. Nielsen reported to the Danish Dermatological Society the case of a woman and her daughter, aged 14 years, who both gave a strongly positive Wassermann's reaction. Apart from Hutchinson's teeth in the child, neither had ever shown any signs of syphilis or had had any anti-syphilitic treatment. The mother gave the following history: She had first been married to a syphilitic husband and had given birth twenty years ago to a child with congenital syphilis. She was afterwards married to a healthy man and became pregnant again six times, the first pregnancy ending in an abortion, the second in the birth of the girl with Hutchinson's teeth, and the third in the birth of a syphilitic child. Her last three children had been healthy.

J. D. ROLLESTON.

The spirochæta pallida in the nasal secretion in congenital syphilis ('*Arch. f. Derm. und Syph.*, 1911, CX, p. 211).—J. Haavaldsen examined the nasal discharge for the *Spirochæta pallida* in 30 cases of congenital syphilis in children, aged from a few hours to six months. Five preparations in each case were made. In 31 out of 150 preparations, *i. e.* over a fifth, the organisms were found. They were only present in small amount, were most abundant in cases where the skin and mucous membranes showed characteristic lesions of congenital syphilis, and very scanty in cases in which nasal discharge was the only symptom. Haavaldsen concludes that the examination for the *Spirochæta pallida* in the nasal secretion has not a great diagnostic importance.

J. D. ROLLESTON.

Heredity of syphilis ('*Arch. f. Derm. und Syph.*, 1911, CX, p. 439).—R. Krefling examined the serum of twenty women who gave no history of syphilis, but were the mothers of syphilitic children or foetuses. In every case Wassermann's reaction was positive. He thinks that the only acceptable mode of transmission of syphilis to the offspring is infection of the foetus *in utero* by the mother. The term "hereditary syphilis" should be abolished and replaced by "congenital syphilis," as infectious diseases cannot be transmitted by heredity.

J. D. ROLLESTON.

The fate of heredo-syphilitic children ('*Arch. f. Derm. und Syph.*, 1911, CVI, p. 17).—F. Bering records 37 cases of *syphilis hereditaria tarda*, *i. e.* that form of inherited syphilis in which the disease may remain latent long after birth, up to and even after puberty, and then manifest itself by symptoms that belong to the late period of syphilis. In 19 there was no history; in only 4 did the father and in 6 the mother admit infection; in 8

Wassermann's reaction in the mother was positive. On the average the disease first showed itself in the eighth year. In the earliest cases it was first noted in the first year, and in the latest in the twenty-sixth year. In 26 cases, however, in which syphilitic manifestations were first observed comparatively late in life, radiating scars about the mouth or Hutchinson's teeth showed that symptoms had been in existence much earlier. Wassermann's reaction was positive in 73 per cent. of the cases in which it was used, a positive result being most frequently obtained in cases which had most symptoms. The most frequent lesions were as follows: Disease of one or both knee-joints (16 cases); in two of these cases other joints were affected; glandular swellings (19 cases), most frequently of the cervical, less frequently of inguinal and epitrochlear regions; parenchymatous keratitis (27 cases), in some associated with choroiditis; bony deformities (26 cases), of which saddle-nose was the most frequent (14 cases). Hutchinson's teeth were found in only 11 cases; small and irregular teeth were more frequent. Radiating scars about the lips were noted in 8 cases. Deafness was found in only 2 cases, and mental disturbance in only 3. Bering holds that the prognosis of parenchymatous keratitis is relatively good, as his cases regained almost normal vision under treatment. The prognosis of bone and joint affections is much more unfavourable as they resist treatment and frequently relapse. In three cases "606" was used; in two it had no effect, and in one there was a rapid disappearance of extensive gummata.

J. D. ROLLESTON.

Household syphilis (*syphilis œconomica*) and acquired syphilis in children (*Bristol Med.-Chir. Journ.*, 1911, xxix, p. 301).—J. A. NIXON records six cases, four of which occurred in children. (1) Girl, aged 15 years, chancre of dorsum linguae, mucous tubercles on tonsils, shotty glands in neck, and later roseola. Her mother had recently been treated for syphilis acquired by extra-conjugal intercourse, and the father was under treatment for secondary iritis. (2) A woman infected by her husband gave birth to a syphilitic baby which died soon after birth. Within two months the baby's sister, aged 2 years, was found to have a sore throat, roseola, and condylomata. The primary lesion was not discovered. Two months later the woman's sister's child, aged 8 months, acquired a chancre of the lower lip and infected its mother's breast. (3) Girl, aged 14 years, with gummata of legs following chancre of cheek at four years, acquired from her mother, who had been infected on the finger when a ward-maid in a lock ward. (4) Girl, aged 4 years. Chancre of left tonsil. Source of infection obscure. Chancres in children are small, almost always extra-genital, and are frequently mistaken for non-syphilitic affections. The mouth, tongue, and especially the tonsils are the commonest sites. The secondaries are often benign and are less severe than in congenital syphilis (*cf. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1911, viii, p. 283, and 1910, vii, p. 415).

J. D. ROLLESTON.

? Acquired syphilis in a patient with Hutchinson's teeth (*Hospitalstidende*, 1912, lv, p. 258).—L. NIELSEN showed at the Danish Dermatological Society a girl, aged 17 years, admitted to hospital for what was apparently a chancre of the left tonsil. The lesion showed several spirochaetes, and Wassermann's reaction was strongly positive. In addition to a general microdontism the upper central incisors showed Hutchinson's deformity. The father had died of tabo-paralysis (Wassermann positive) and the mother had aborted twice.

J. D. ROLLESTON.

Syphilitic arthritis ('*Allg. Wien. med. Zeit.*,' 1911, LVI, p. 538).—**Pollak** demonstrated to the Vienna Gesellschaft für Kinderheilkunde a boy, aged 5 years, who had been suffering for six weeks from swellings of both knee-joints. There was at first a slight rise of temperature. Salicylates had no effect; Röntgen rays showed the absence of any lesion. A positive Wassermann's reaction proved the presence of syphilis. He mentioned the case of a girl, aged 11 years, who for five years had intermittent hydrops of the knee without pain or fever. In cycles of fourteen to twenty-one days there would appear regularly a swelling of one knee, followed by that of the other. Wassermann's reaction was positive: 0·3 grm. salvarsan was injected. Eight months had since elapsed without any return of the hydrops.
M. D. EDER.

Syphilitic lepto-meningitis in sucklings ('*Jahrb. f. Kinderheilk.*,' 1912, LXXV, p. 222).—**G. Rach** describes this case in a child, aged 4 months, in which the *Spirochæta pallida* was found in the cerebro-spinal fluid. The necropsy showed marked hyperæmia of the pia mater with exudation, both fibrinous and purulent. The author briefly mentions similar cases from the literature, and he considers that the presence of the spirochætæ in the cerebro-spinal fluid in sucklings shows a severe, active, true syphilitic disease of the central nervous system or its membranes, with the proviso that they are not to be found in the blood.
F. R. B. ATKINSON.

Syphilis and diseases of the ear ('*Am. Journ. Derm.*,' 1912, XVI, p. 193).—**E. P. Fowler** examined 128 cases of ear disease, 66 of which were in children, by Wassermann's reaction, with the following results. The diseases of the ear most frequently accompanied with positive reactions were the acute and chronic suppurations. Seven out of 61 such cases gave strongly positive reactions. The number of other ear diseases in children was not sufficient to base any reliable conclusions upon. Fifty per cent. of the cases were acute inflammations, and all but two gave a positive reaction; of 27 chronic cases, 5, all cases of suppurative otitis media, were strongly positive. Hypertrophied tonsils and adenoids were present in 43 cases. Only 4 of those were strongly positive, and were all cases of chronic suppurative otitis. A positive reaction was twice as common in females as in males.
J. D. ROLLESTON.

Treatment of syphilitic sucklings with salvarsan ('*Jahrb. f. Kinderheilk.*,' 1912, LXXV, p. 131).—**Noeggerath** advocates the use of a concentrated solution of salvarsan—0·1 grm. of salvarsan in 2 c.cm. of Weintraud's alkaline solution. He also recommends injection into the cranial veins, because of the difficulty in injecting the veins of the arms in infants without exposing them by a surgical operation. When the child cries the veins stand out. He puts the minimum efficacious dose at 2 mg. per kilogram of body-weight, but says that the dose should be increased when possible up to 0·1 grm. for each injection. As regards the results obtained by this treatment, while recognising the rapid symptomatic effect of salvarsan, he is not convinced that it is more rapid than that of mercury. In spite of this admission, he advocates combined treatment with mercury and salvarsan. Of his twenty-eight cases, nine died (*morituri te salutant!*).
C. F. MARSHALL.

Reviews.

DEN WASSERMANN'SKE REAKTION OG DENS KLINISKE BETYDNING. By
RUDOLF KREFTING. Kristiania, 1911.

IN this monograph Dr. Krefting reviews the Wassermann reaction at length, but the part which concerns us here is the so-called heredity of syphilis. He examined the blood of twenty mothers who had given birth to syphilitic children or fetuses, and in whom there was no history of syphilis. In all the cases the Wassermann reaction was positive. In this Krefting has confirmed results arrived at by others. He concludes that syphilis in the new-born [apart, of course, from accidentally acquired syphilis.—G. P.] is due to the syphilis of the mother. He further considers that the term "congenital" is better than "hereditary." This is a point I insisted on in the discussion on "Inherited Syphilis" before the Society for the Study of Disease in Children in 1907, when I stated that the English term "congenital" was preferable to the continental one "hereditary." I insisted then on the maternal origin of congenital syphilis and considered the paternal theory was incorrect. Before 1907 and since, I have expressed the same view held by many other observers. Krefting refers to the "pebrine" of silk-worms, and apparently accepts the correctness of a "germinative transmission" of disease in that case. But, as I pointed out in 1907 ('Rep. Soc. Study Dis. Child.,' 1908, viii, p. 76), neither Matzenauer nor myself had been able to verify the statement in the work of Pasteur relating to the silkworm disease. Professor Bateson in his paper on "Mendelian Heredity" ('Brain,' 1906, xxix, p. 157), stated "that it was possible some diseases might be due to the transmission of the disease germ through the reproductive cells as in pebrine." I called Professor Bateson's attention to the contention of Matzenauer and myself, and he replied that "Dr. Pernet properly insists that the transmission of a disease germ in the egg is not the same thing as in the reproductive cells." Krefting's researches also confirm what others had also shown with the Wassermann reaction, that old Abraham Colles's observation was correct.

G. PERNET.

ANOMALE KINDER. Dr. med. L. SCHOLZ, Direktor der Provinzial-Irren- und Idiotenanstalt in Kosten. Berlin: Karger, 1912. Pp. 442. Price 10 marks.

THIS book is not written entirely for medical men, but is intended for parents, teachers in educational institutions, and all who have to do with abnormal children, consequently it partakes of the semi-popular rather than the scientific, and contains nothing that is new to the physician who has had experience of abnormal children. And this term, it should be noted, is restricted to the mentally abnormal. It is divided into fifteen sections, which deal with such matters as the bounds of mental health, heredity and degeneracy, feeble-mindedness and some of its varieties with their chief characteristics, nervousness, hysteria, epilepsy, the various psychopathic conditions of children (divided into twelve groups), prophylaxis, treatment and social care, etc.

As the author remarks at some length, there is considerable difficulty in defining the mentally abnormal in view of the wide range of variation;

he looks upon those whose talents place them above the average mass of mankind as being just as abnormal as those at the lower end of the scale. One essential characteristic of abnormality he regards as a want of harmony and a general condition of unstable equilibrium. The section dealing with feeble-mindedness is accurate but somewhat meagre. It is interesting to note that whilst Mongolism occurs in England to the extent of about 5 per cent. of all aments, the proportion in Germany, according to the author, is only 1 per cent. Under the section devoted to hysteria he describes several epidemics of this affection amongst school-children, which, as the condition is rare in this country, are worth quoting. In a school at Meissen in 1905 a girl, aged 13 years, was attacked with a trembling of the hands. Within three months sixty-six girls, aged nine to thirteen years, were similarly affected, so that the school had to be closed, and the epidemic gradually spread until two months later 237 girls were affected. The trembling chiefly affected the hand and forearm of one side, began suddenly, and lasted from a few minutes to half an hour or even longer. Many children had several attacks a day, others only one or two a week. Another epidemic occurred in 1892 in a village school near Liegnitz, and consisted of attacks of convulsions, which were often so violent that the girls fell off the benches on to the floor. In one week twenty out of thirty-eight scholars were affected, eight with loss of consciousness. The epidemic died out during the summer holidays, and, as in the other case, it was confined to girls.

The section dealing with the psychopaths is a description of the chief varieties of mental abnormality standing on the borderland between sanity and insanity, and will doubtless be found very useful by those for whom it is intended. With regard to causation generally, the author is convinced of the great importance of heredity, although the antecedent condition is not necessarily identical with that occurring in the patient: for instance, he finds that nearly one third of epileptics come from alcoholic parents. Prophylaxis, therefore, must chiefly consist in the application of eugenic principles. As Bunge says, the worst criminal is he who poisons the germ-cells, and the author pertinently asks, "Why should it be impossible to prohibit the marriage of patients suffering from hereditary diseases and of hereditary criminals? not on the ground of personal freedom, for the State already interferes largely with this in the cause of health, as in infectious and mental diseases. . . . If knowledge is not yet sufficient for laws, we still might advocate medical examination before marriage." In fact, the author enters a powerful plea for eugenics. If his table of developmental data is to be relied upon there would appear to be considerable differences between the children of England and Germany, for he states that the normal child crawls on the floor at the sixth month, whilst it is only by this time that he opens his mouth eagerly on seeing the bottle.

It will be seen that the book covers a great deal of ground, and although some sections are handled in a comprehensive manner, others are decidedly sketchy. This is probably due to the fact that the author is writing chiefly from his own personal experience, and although this method is of considerable value, especially in the present case, it somewhat militates against the volume's utility as a text-book. It contains practically no references to recent work in France, America and England, and not a single illustration.

A. F. TREDGOLD.